

MICHIGAN STATE

U N I V E R S I T Y

09/17:

Resume Writing and Interviewing

The Capstone Experience

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Department of Computer Science and Engineering
Michigan State University

Fall 2018



*From Students...
...to Professionals*

Purpose

- Resume
 - Get Noticed
 - Get an Interview
 - Get in the Door
- Interview
 - Tell Your Story
 - Get a Good First Job
 - Start a Successful Career



Caveats Resume Writing & Interviewing

- Partly...
 - Science (Spock)
 - Art (Captain Kirk)
- Lots of Opinions
 - Varied
 - Sometimes Conflicting
- Always Exceptions to Every Rule
- Do what works for you.



Resume Writing and Interviewing

➤ Resume Writing

- Interviewing

Resume Challenges

- Competition
 - 100's or 1,000's of 10,000's of Resumes
 - Lots Similar
 - Lots Qualified
- Typical Usage
 - Visual Scan (< 10 Seconds)
 - Optical (Machine) Scan
 - Often Not Read in Detail
 - Often Discarded

How will your resume stand out?



Resume *Nota Bene*

Every Last Detail Matters

If...

- ...cannot find relevant information quickly
- ...email wrong and bounces back
- ...phone number wrong
- ...not visually appealing
- ...not professional looking
- ...no answer and no voicemail
- ...etc...

then...

- ...pitch your resume and move on to the next one



Resumes 101

- Exactly One (Full) Page
 - Not More
 - Not Less
- Simple Formatting
(Machine (Optical) Scan-able)
- Honest
- Contains...
 - Contact Information
 - Objective
 - Education
 - Skills
 - Experience
 - Other Activities



Contact Information

[1 of 3]

- Name
- Email Address
(Use “Professional” Email Address)
 - No
 - TheGamingWizard@hotmail.com
 - BarCrawler@gmail.com
 - Yes
 - dyksen@msu.edu
 - wayne@dyksen.com
 - wayne.dyksen@gmail.com
- US Mail Address
 - Current (Your Apartment)
 - Permanent (Your Home Address (Parents’?))
(What if I want to contact you after you leave MSU?)



Contact Information

[2 of 3]

- Phone
 - Current
 - Probably Your Cell Phone
 - No Cell Phone?
 - ❖ Get one.
 - ❖ Providers offer (cheap) pay-as-you-go service.
 - Permanent
 - Your “Home” Phone (Parents’)?
 - Your Cell Phone?
 - What if I want to call you after you leave MSU?
 - Get “Voicemail” for All Phones



Contact Information

[3 of 3]

- Phone

- Fix your voicemail “not here” messages.

- No

- ❖ “Hey there! You’ve reached the voicemail of the funnest person at MSU. Leave your number and I’ll give you a ring but only if you’re one of the lucky people.”

- ❖ “I’m not here. Leave a message.”

- ❖ “Hi. I’m sorry I missed your call. Please leave me a message and I’ll get back to you. Thanks for calling and have a great day.”

- Yes (Include Your Name!)

- ❖ “Hi. This is Wayne Dyksen and you’ve reached my voicemail. Please leave me a message and I’ll get back to you. Thanks for calling and have a great day.”



Objective

- Very Concise (One Line)
- Indicate internship or permanent employment.
- Avoid flowery BS.
- Examples
 - To secure a summer internship as a software developer.
 - To secure permanent employment as a software engineer.
 - To secure permanent employment as a software engineer that utilizes and expands my skills in computer science.
- Be specific only if you really mean it. Why?
 - To secure permanent employment as a database administrator
 - To secure permanent employment as a network administrator.



School Address
Calvin College
Grand Rapids, MI 49546
(616) 555-1234

Bob Dyksen
bob.dyksen@gmail.com

Permanent Address
2175 Burcham Dr.
East Lansing, MI 48823
(517) 555-1212

Objective To secure a full time position as a software engineer that utilizes my skills and expands my knowledge in computer science.

E.J. Dyksen

School Address

2148 Raspberry Court SE, Apt H
Grand Rapids, Michigan 49546

ej.dyksen@gmail.com
(517) 555-1234

Permanent Address

2175 Burcham Drive
East Lansing, Michigan 48823
(517) 555-1212

Objective

Secure an internship that will expand my knowledge and experience in computer science.



Interview Tip

- Be ready to answer questions like...
 - “What do you like to do?”
 - “What kind of positions interest you?”
 - “Where do you want to be in five years?”
- Know Positions
 - Program Manager (PM) or Developer (Dev)
 - Associate Software Developer
 - Associate/Sr. Consultant
 - Etc...



Your GPA

- Used by Companies for Screening
 - Use Varies by Company
 - If (GPA < Threshold) then { No Interview }
 - Threshold Varies by Company
- On Resume
 - Probably. Almost Certainly (IMHO)
 - Easy to Find
 - If GPA not there...
 - I'm thinking...
 - I'm going to...
 - Remove After First Job



So-So GPA's

- Compute “Sub” GPA's
 - Overall vs CSE
 - Freshman vs Sophomore Through Senior
 - Freshman/Sophomore vs Junior/Senior
 - Freshman, Sophomore, Junior, Senior
 - Etc...
- Give a Good Explanation
 - Was Immature. Grew Up.
 - Not Motivated When Freshman, Am Now
 - Worked 40 Hours/Week to Pay for School
 - Etc...



Education

- Degree BS
- Major Computer Science
 - Cognate Business
 - Minor Mathematics
 - Date Expected December 2018
- Institution Michigan State University
- GPA
 - Cumulative 3.50/4.0
 - CSE 3.70/4.0
- Relevant Courses
 - Number CSE 231
 - Title Introduction to Programming
 - Topics in Parentheses (Python)
- Non-MSU Institutions
 - May Include Other Colleges/Universities
 - Do Not Include High School



Cognate

- Highly Valued by Companies
- Leverage
 - On Resume
 - During Interview
- “Cognate”
 - Unknown Term
 - Confusing Label On Resume
 - Label As “Cognate (Minor)”
 - Explain Cognate Like a Minor
 - Be Careful to Not Misrepresent as Official Minor



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To secure a full time position as a software engineer that utilizes my skills and expands my knowledge in computer science.

Education

B.A., Computer Science, Expected December 2002

Calvin College, Grand Rapids, MI

- CS GPA: 3.50/4.0, Cumulative GPA: 3.13/4.0
- CPSC 186, Introduction to Data Structures with C++ (C++, Visual Studio 6.0)
- CPSC 210, Web Site Administration (HTML, CGI, Perl, Apache Web Server)
- CPSC 230, Data Structures and Algorithms (C++, Java, Visual Studio 6.0)
- CPSC 247, Software Engineering (C, UML)
- CPSC 270, Operating Systems (C++, Java, Perl)
- CPSC 300, Computer Graphics (OpenGL)
- CPSC 330, Databases (mySQL, Oracle, Java)
- CPSC 370, Networking (TCP, UDP)
- CPSC 380, Programming Languages (C++, ADA, LISP, Smalltalk)
- CPSC 392, Ethics in Computing
- CPSC W80, Cryptography and Computer Security
- ENGR 220, Computer Architecture (SPARC/MIPS, Assembly Programming)



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- CPSC 330, Databases (mySQL, Oracle, Java)
- CPSC 370, Networking (TCP, UDP)
- CPSC 380, Programming Languages (C++, ADA, LISP, Smalltalk)
- CPSC W80, Cryptography and Computer Security
- ENGR 220, Computer Architecture (SPARC/MIPS, Assembly Programming)

Course Related Projects

- Linux Kernel Network Router (CPSC 370)
 - Implemented a kernel-resident network router.
 - Routed IP network traffic across two or more NICS.
 - Optimized routing times via cached routes.
- Virtual Private Network (CPSC W80)
 - Designed a virtual private network protocol.
 - Implemented a VPN via TCP/IP tunneling.
 - Utilized DES3 cryptography for secure IP data packets.



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Objective

Secure an internship that will expand my knowledge and experience in computer science.

Education

BA, Computer Science

Expected May 2008

Calvin College

Grand Rapids, Michigan

- CS 108, Introduction to Computing (Java)
- CS 112, Introduction to Data Structures with C++ (C++)
- CS 212, Data Structures and Algorithms (Java)
- CS 214, Programming Language Concepts (Java, Lisp, and Scheme)
- CS 232, Operating Systems and Networking
- CS 262, Software Engineering
- CS 352, Computer Graphics
- ENGR 220, Introduction to Computer Architecture (SPARC Assembly)
- MATH 161, Calculus I
- MATH 156, Discrete Mathematics for Computer Science
- MATH 256, Discrete Structures and Linear Algebra



Interview Tip

- Be ready to answer questions like...
 - “So, what did you do in CSE 422?”
 - “Tell me about a favorite course.”
 - “Tell me about your Linux Kernel Network Router.”
- Know Your Courses
 - Topics
 - Books and Readings
 - Projects
- Know Some Projects in Depth
 - Requirements
 - Implementation
 - Complexities
 - Cool Features



Skills

- Simple List
 - Languages
 - Operating Systems
 - Software Systems
 - Software Packages
- Avoid
 - Relative Trivialities (e.g., Microsoft Word)
 - Weak or Non-Existent Skills
 - BS (Effective Team Member, Customer Oriented, etc.)
- Possibly Classify (But Only If Room)
 - Familiar
 - Proficient
 - Certified



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Skills

C, C++, ADA, Smalltalk, Lisp, Java, Perl, HTML, Windows 2000/XP, UNIX, Linux, Visual Studio 6.0



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- MATH 161, Calculus I
- MATH 156, Discrete Mathematics for Computer Science
- MATH 256, Discrete Structures and Linear Algebra

Experience

Skills

- Java, C#, C++, PHP, CSS/XHTML, Ruby (and Rails), SQL, UML, Visual Studio 2005
- Windows Server 2003 System, Exchange Server 2003, IIS 6.0, SQL Server 2005
- Microsoft Windows Vista, Tablet PC platform, Media Center platform, Windows Mobile 5.0
- Eclipse IDE, Linux, Apache, MySQL, PostgreSQL, other open source products
- Adobe Premiere Pro 2.0, Adobe After Effects 7.0, Macromedia Fireworks 8.0



Interview Tip

- Be ready to answer questions like...
 - “How proficient are you in Perl?”
 - “What have you written using Ruby on Rails?”
 - “Have you ever administered an Exchange Server?”
- Know
 - Your Skills
 - Examples of Using Your Skills
 - Your Limitations



Experience

- Position Description
- Company
- Dates
- Bullet List of Accomplishments
 - Concise
 - Specific
 - Begin with Action Verb
 - One Line Per Bullet
 - Sentence Fragments Okay
- Only Most Relevant and Most Recent



Skills C, C++, ADA, Smalltalk, Lisp, Java, Perl, HTML, Windows 2000/XP, UNIX, Linux, Visual Studio 6.0

Experience **Software Engineering Internship** **The Boeing Company, St. Louis, MO**
Summer 2002

- Made corrections in T-38C cockpit software
- Used System Integration Lab (SIL) to test changes to MDP software
- Developed ACMI debrief application for T-38C aircraft (SDT, C++, Visual Studio 6.0)
- Participated in software development processes

Software Engineering Internship **The Boeing Company, St. Louis, MO**
Summer 2001

- Participated in SEI Level 3 Activities
- Developed automated testing utilities for the AHWCS project (Java, C++)
- Tested the launch control software for the *Harpoon Block II* missile
- Managed group web pages

Program Analyst Internship **Mutual of Omaha, Omaha, NE**
Summer 2000 - Spring 2001

- Designed and implemented software (Java, some C++)
- Involved in a major company project
- Worked closely with associates from other companies (Trilogy, ICONIX)
- First telecommuting intern



Experience

Program Manager Intern

Microsoft Corporation

Summer 2006

Terminal Services

- Investigated solutions for a large software architecture problem
- Initiated communication with external teams for alternative solutions
- Delivered a V1 specification encapsulating the first step in the solution

System Architect and Administrator

Michigan State University

Summer 2005

College of Agriculture and Natural Resources

- Designed and implemented a major Windows Server 2003 and Exchange Server 2003 installation to handle 2,000 users
- Maintained two concurrent Active Directory forests with trusts for migration purposes
- Recovered overnight from a university-wide security issue

System Administrator

Michigan State University

Summer 2003, Spring and Summer 2004

Clara Bell Smith Center

- Designed and implemented a Windows Server 2003 and Exchange Server 2003 installation
- Converted from stand-alone desktops to fully managed desktops
- Packaged custom applications for group policy rollout

Programmer

Michigan State University

Summer 2002

Men's Basketball

- Investigated ways to use technology in the collegiate athletic environment
- Developed web service for contacting players via mobile phone
- Administered desktops with Windows XP, 2000 in a mixed Windows/Novell environment

Skills

- Java, C#, C++, PHP, CSS/XHTML, Ruby (and Rails), SQL, UML, Visual Studio 2005
- Windows Server 2003 System, Exchange Server 2003, IIS 6.0, SQL Server 2005
- Microsoft Windows Vista, Tablet PC platform, Media Center platform, Windows Mobile 5.0
- Eclipse IDE, Linux, Apache, MySQL, PostgreSQL, other open source products
- Adobe Premiere Pro 2.0, Adobe After Effects 7.0, Macromedia Fireworks 8.0



Interview Tip

- Be ready to answer questions like...
 - What kind of corrections did you make to the T38C software?
 - What's an SEI Level 3 activity?
 - What's a V1 specification?
 - What was the university-wide security issue and how did you recover?
- Know Your Summer Internships
 - Concise Description
 - Software Systems
 - Your Responsibilities
- Know Some Specific Accomplishments



Other Activities

- Including...
 - Clubs
 - Awards
 - Hobbies
 - Outside Interests
- Concise
- Avoid
 - Trivialities and/or BS
 - High School Activities and/or Awards
- Omit If None



- Experience**
- Software Engineering Internship** **The Boeing Company, St. Louis, MO**
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 - First telecommuting intern

- Hobbies**
- Licensed Private Pilot
 - Piano & Pipe Organ

System Architect and Administrator

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- Eclipse IDE, Linux, Apache, MySQL, PostgreSQL, other open source products
- Adobe Premiere Pro 2.0, Adobe After Effects 7.0, Macromedia Fireworks 8.0

Awards

- First Place, [Memories Category](#), [Microsoft Start Something Amazing Awards](#), 2005
- Choral Honor Award, Okemos High School, Okemos, Michigan, 2004

Activities

- Calvin IMPROV, Leader
- Capella Choir of Calvin College

Good idea to include links.



Leveraging the Capstone Course

Software Engineer Intern
Michigan State University

Fall 2017
East Lansing, Michigan

- Worked on a team of five students in MSU senior capstone course.
- Designed and implemented [SEA: Spartan Experience App](#).
- Worked directly with customer to develop a complete project plan.
- Produced [video](#) about project and delivered software product.
- Awarded the [Urban Science Sigma Award](#).

Good idea to include links.



Interview Tip

- Be ready to answer questions like...
 - “So, what do you do for fun?”
 - “What do you do when you’re not working?”
 - “Do you have any hobbies?”
 - “What’s ACM?”
 - “What did you do accomplish as president of WIC?”



Bonus Resume Tip

- Learn how to use Microsoft Word!
 - Use Paragraph Spacing
 - Do use paragraph spacing between lines.
 - Do not use empty lines, i.e., just hit return.
 - Use Styles
 - Use Tabs
 - To Line Up Things
 - Do not use spaces, which won't work anyway.
 - Use Right Justified Tabs
 - To Justify Things on the Right Margin
 - Do not use default tabs and/or space, which won't work anyway.
 - Etc...
- Submit PDF, Not Word Source
- Test Print Resume (on Paper)



Bonus Resume Tip

- Single Page Limit

But...

- Multiple Versions Possible

- Target For Particular

- Industry
- Company

- Vary

- Lists of Courses
- Lists of Course Projects
- Bullet Points Describing Experiences/Internships



Resume Writing and Interviewing

✓ Resume Writing

➤ Interviewing



Clean Up Your Web Presence

- Facebook
- Twitter
- Snapchat
- Personal Web Pages
- Etc...

HR people will and do check these things out.

What about your 1st Amendment rights?



Due Diligence

- Research the company.
- Research the interview.
 - Talk with others who have been interviewed.
 - Ask “What style of interview should I expect?”
- Research the interviewers.
 - Get an interview schedule with names and titles.
 - Figure out who does what.
 - Google for interviewer interests and hobbies.
- Research the dress code.
 - Ask recruiter/interviewer.
 - Ask others.
- Do not be surprised.



Interview Styles

- Many & Varied
 - Technical (How does IPv6 differ from IPv4?)
 - Problem-Solving (In the adjacent room are three lights...)
 - Behavioral (Tell me about a time when...)
 - Coding (Write a recursive function that...)
 - Etc...
- Research
 - Types of Interview
 - Questions for Each Type
 - Type to Be Used
- Do not be surprised.



What's the point?

Will you get these exact questions?

- You Might
- But Probably Not
- So, what's the point?



Look the Part

[1 of 2]

- People do judge books by their covers.
- Research the “look”.
- If you want the “part”, “look” the “part”.
- Appearance
 - Clothes
 - Shoes
 - Hair (Style, Length, Colors, ...)
 - Body Piercings
 - Etc...



Look the Part

[2 of 2]

- Get Advice From Someone With Taste
 - Styles in General
 - What Looks Good on You
 - Size and Fit
 - Whole Package
 - Clothes
 - Shoes
 - Jewelry
 - Hair
 - Etc...
 - View as Investment
- Do due diligence.
- Expectations for interviewee may be very different than expectations for interviewer or employee.



Your Personal Presence

- Introduce Yourself
- Learn How to Shake Hands
- Avoid Nervous Habits
- Make Eye Contact (But Don't Stare Down)
- Give "Right Length" Answers
 - Long Enough
 - Not Too Long
- Speak Correct English
 - Subjects: I, He, She, It
 - Objects: Me, Him, Her, It
 - NOT
 - "Him and I went to the basketball game."
 - "Her and me went to the football game."
- If Necessary
 - Repeat Question to Buy Time
 - Ask for Clarification
- Practice Wearing Interview Attire



The First Question

- What's the first question at many interviews?
- Tell me/us about yourself.
- Be Ready
- Practice Answer
- Avoid
 - Too Short
 - Too Long
 - Too Vague
 - Too Detailed



Bad Comments to Make

...During the Interview

- “I see you just lost that big contract to Acme.”
- “Wow, your stock price really took a hit yesterday.”
- “It sure looks like the cost of living is high here.”
- “Windows 8 was a big mistake.”
- “I didn’t do well in that course because the professor was terrible.”
- “I didn’t do well in that course because I wasn’t interested in it.”
- Etc...



Bad Questions to Ask...

...During the Initial Interview

- “Can you tell me what your company does?”
- “How much will I make?”
- “How much vacation will I get?”
- “Is there dental coverage?”
- “Will you pay moving expenses?”
- “Will I get my own office?”
- “How soon will I be promoted?”
- “Will I have to work more than 40 hours per week?”
- Etc...

(What if they ask you “How much do you expect to make?”)



Good Comments to Make..

...During the Interview

- “That T-38 looks like a really cool plane.”
- “The 787 looks amazing. Passengers will really like the large structure bearing windows.”
- “Alan Mulally was a great hire for you.”
- “I’m running Windows 10 and it’s great.”
- “I’ve been running beta Mojave for two months.”



The Last Question

- What's the last question at many interviews?
- Do you have any questions for me/us?
- What's a really bad answer?
- What are some good answers?



Good Questions to Ask...

...During the Interview

- “Are there opportunities for professional development?”
- “Is there support for advanced degrees?”
- “What career paths are available?”

Okay Questions to Ask...

- “What’s the corporate culture like?”
- “What’s a typical week like?”



Things Not to Do

- Don't complain about anything like...
 - ...your trip
 - ...the airline
 - ...the hotel
 - ...the weather
 - ...the interview process
 - ...other interviewers
 - ...other companies
 - ...etc...
- Don't discuss politics or religion.
- Don't drink alcohol (ever, never, not at all).
- Etc...



Business Cards

- Be ready to handout your business card.
 - Use MSU email account.
 - Include personal URL with link to resume (downloadable).



Follow-Up

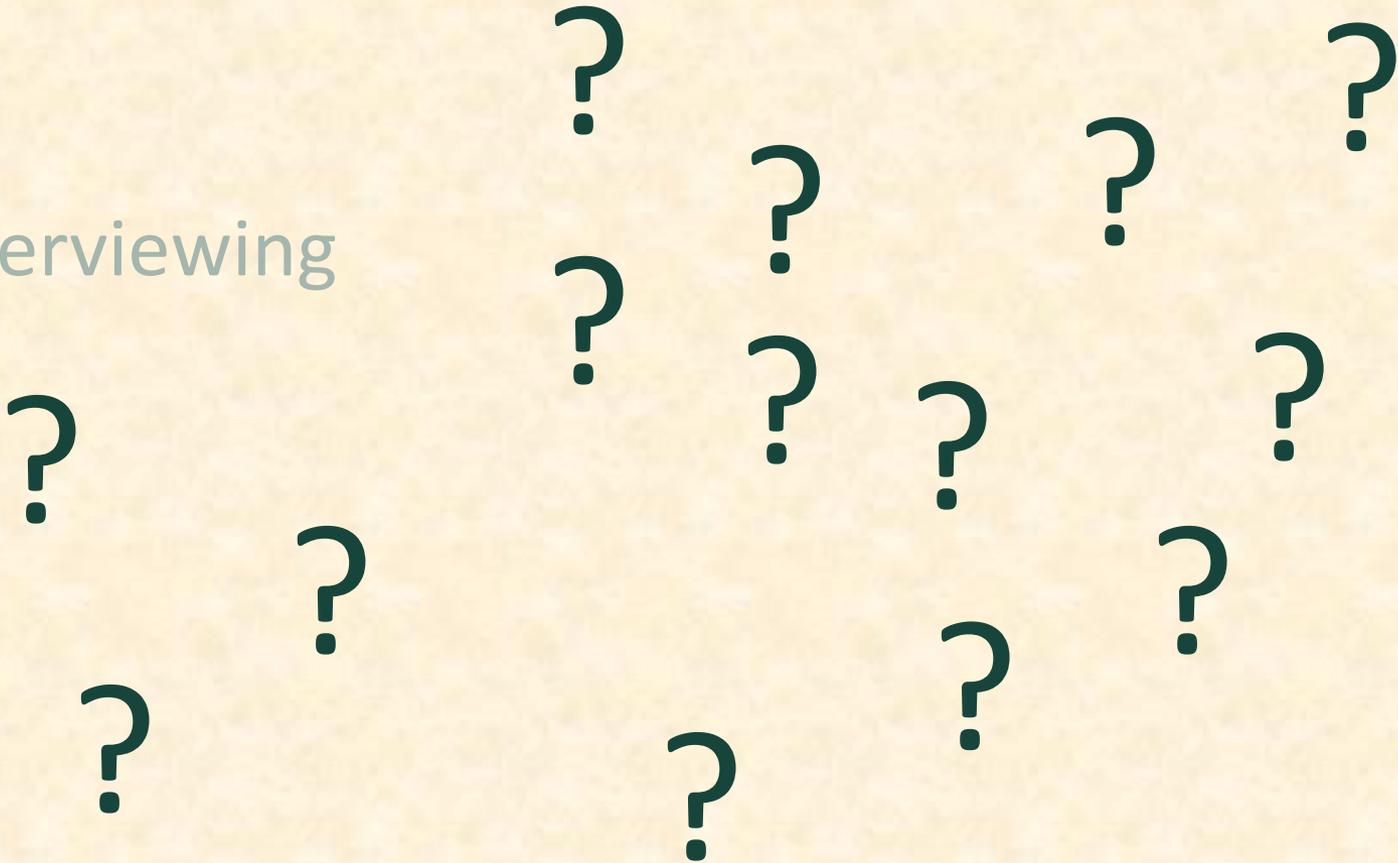
- ASAP
- Hand-Written Note
 - US Mail
(Get Business Cards for Address)
 - Buy Nice MSU Note Cards
- Try to Include Brief Personal Comment
 - Related to Interviewer
 - Record Info on Back of Business Card ASAP



Resume Writing and Interviewing

✓ Resume Writing

➤ Interviewing



What's ahead?

[1 of 2]

All-Hands Meetings

- ~~08/29: Capstone Overview~~
- ~~09/05: Capstone Overview~~
~~Project Plan~~
~~Team Photos: Teams Amazon – Mozilla~~
- ~~09/10: Risks and Prototypes~~
~~Team Photos: Teams MSUFCU – Whirlpool~~
- 09/12: Team Status Report Presentations
- 09/17: ~~Resume Writing and Interviewing~~
- 09/19: Schedule and Teamwork
- 09/24: Team Project Plan Presentations
- 09/25: MSU Fall Career Days (formerly Career Gallery)
- 10/15: Team Alpha Presentations



What's ahead?

[2 of 2]

- Project Plan Documents and Presentations

- PowerPoint Template

- Download Now
- Read the Read Me Slides (Over and Over and Over...)

- Submission

- Both Project Plan Document and PowerPoint Slide Deck
- Due 12:01 a.m., Monday, September 24
- See Submission Instructions in Template

← Get on this now!

- Presenting

- 5 Teams Per Meeting Over 4 Meetings
- Schedule Posted Sunday Evening
- Strict 14 Minute Time Limit
- Use Team Member Laptop
 - ❖ Bring Power Cord
 - ❖ Test In Meeting Room (in Advance)

- Rehearse
- 5% of Final Grade
- Business Casual Dress

← Nota Bene!

- Formal Team Photos

- Immediately Following Meeting
- In Capstone Lab

- Schedule Conflicts

- Only for Interview Trips or Grace Hopper
- Notify Dr. D. and your TA well in advance.



READ ME

[1 of 2]

- Presenting
 - The purpose of the project plan presentation is to convince everyone that your team has scoped your project, understands the functional, design and technical specifications, and that your team has a crafted plan to develop, debug and deliver your project to your client on time (Wednesday, December 5) and on budget (\$0).
 - The time limit for your presentation is 14 minutes, which will be strictly enforced. Practice your presentation to ensure that you will finish within the allotted time.
 - All team members are required to dress business casual on the day of their presentation. Business casual does not include sneakers, tennis shoes, hats, coats, hoodies, t-shirts or shirts that are not tucked into pants. Google “what is business casual.”
 - “Formal” team photos of the presenting teams will be taken in the Capstone Lab immediately following these all-hands meetings. Plan on it.



READ ME

[2 of 2]

- Content
 - Do not include any company confidential information in your presentation since all presentations will be posted on the web site.
 - Submit your presentation to your client for approval at least two days in advance.
 - Throughout the PowerPoint template, replace placeholders [...] with the appropriate information.
 - Edit the center footer by clicking the Header & Footer button on the Insert ribbon. Change [Team Name] in the footer to your company name as in “Team TechSmith Project Plan Presentation”. If necessary, extend the width of the center footer textbox on the master slide, making sure that you re-center the enlarged textbox.
 - Delete the example Screen Mockups and System Architecture slides and all Read Me slides from your presentation.
 - The screen mockups should contain little or no bordering transparent or whitespace. Use paint.net to crop them appropriately.
 - If a slide contains more than one screen shot or additional artwork (like an arrow), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit
- Required Template
 - Do not edit the Slide Masters.
 - Do not change the organization of slides.
- Presentations
 - Although the presentations are scheduled over the course of four meetings, all teams must be prepared to present on the first day scheduled, Monday, September 24.
 - The order of the presentations will be posted on our [All-Hands Meetings](#) page in the evening of the day before the first day scheduled for presentations.
- Submission ← **Read this carefully.**
 - Email your Word Document and PowerPoint slide-deck to [Dr. D.](#) and to your client by 12:01 a.m. on Monday, September 24. (Think Sunday night.) Send your presentation to your client in a separate email; do not cc me.
 - For subject, use “Team [Team Name]: Project Plan Presentation” as in “Team Amazon: Project Plan Presentation”.
 - Attach the Windows PowerPoint source file named “team-[team-name]-project plan-presentation.pptx” replacing “[team-name]” with your team name (using all lower case and replacing all blanks with dashes) in your filename as in “team-urban-science-project plan-presentation.pptx”.
 - Attach the Windows Word source file named “team-[team-name]-project plan-document.docx” replacing “[team-name]” with your team name (using all lower case and replacing all blanks with dashes) in your filename as in “team-urban-science-project plan-document.docx”.
 - Include some text in the body to practice being a professional and to avoid having your email sent to my junk folder.



MICHIGAN STATE

U N I V E R S I T Y

Project Plan

[Project Title 36pt]

The Capstone Experience

Team [Team Name 24pt]

[Team Member 1 16pt]

[Team Member 2 16pt]

[Team Member 3 16pt]

[Team Member 4 16pt]

[Team Member 5 16pt]

[Team Member 6 16pt]

Department of Computer Science and Engineering
Michigan State University

Fall 2018



*From Students...
...to Professionals*

Functional Specifications

- Point 1
- Point 2
- Point 3
- Etc...

This is your project overview.

Describe what problem your project solves.

Answer the question “What does your project do?”

This is your “elevator pitch”.

Delete this textbox.



Design Specifications

- Point 1
- Point 2
- Point 3
- Etc...

Articulate a summary of your project's major features as well as its overall design.

Delete this textbox.



Screen Mockup: [Title 1]

You may include as many screen mockups as you have like, but you must include at least four examples.

To include more than four, you can duplicate this slide as many times as necessary.

Good screen mockups should help you elicit project specifications from your client.

Do not include screen mockups of trivial things such as splash screens or login screens.

Do not include screen grabs of other software.

Give each screen mockup slide a title.

See below for examples and instructions.

Delete this textbox.



Screen Mockup: [Title 2]

You may include as many screen mockups as you have like, but you must include at least four examples.

To include more than four, you can duplicate this slide as many times as necessary.

Good screen mockups should help you elicit project specifications from your client.

Do not include screen mockups of trivial things such as splash screens or login screens.

Do not include screen grabs of other software.

Give each screen mockup slide a title.

See below for examples and instructions.

Delete this textbox.



Screen Mockup: [Title 3]

You may include as many screen mockups as you have like, but you must include at least four examples.

To include more than four, you can duplicate this slide as many times as necessary.

Good screen mockups should help you elicit project specifications from your client.

Do not include screen mockups of trivial things such as splash screens or login screens.

Do not include screen grabs of other software.

Give each screen mockup slide a title.

See below for examples and instructions.

Delete this textbox.



Screen Mockup: [Title 4]

You may include as many screen mockups as you have like, but you must include at least four examples.

To include more than four, you can duplicate this slide as many times as necessary.

Good screen mockups should help you elicit project specifications from your client.

Do not include screen mockups of trivial things such as splash screens or login screens.

Do not include screen grabs of other software.

Give each screen mockup slide a title.

See below for examples and instructions.

Delete this textbox.



Screen Mockup Instructions

- Ensure that your mockups...
 - are readable (size-wise) when projected,
 - have the correct aspect ratio,
 - are scalable, and
 - are centered vertically (between the green bar in the title and the footer) and horizontally (Use Home > Arrange > Align).
- Each screen mockup should be a single PNG image.
- The screen mockups should not contain any bordering transparent or whitespace. Use [paint.net](https://www.paint.net/) to crop them appropriately and change any bordering whitespace to transparent.



Screen Mockups: Phone Interface

APTIV | Guest

Josh M. Cybersecurity Engineer

Search

Main Navigation

- Dashboard
- Products
- Tasks
- Pending Requests
- Threat Tracker
- Vulnerability Tracker
- Incident Tracker
- Mitigation Tracker
- Register a Product
- Report an Incident
- Calendar
- Help
- Settings

V2X FCA | Dashboard > Products > V2X > V2X FCA

Project Status: Finalized

Project Registration → TARA → Mitigation Remediation → Vulnerability Assessment → Penetration Assessment → Final Approval → Finalized

Recent Updates

- Jane D. added 2 new members to the project 3 hours ago
- Josh M. accepted Final Approval Request 2 days ago
- Jane D. marked Task 5 V2X.OS.4 Boot Process as Completed 3 days ago

Project Modules

- Project Information
- TARA
- Mitigation Remediation
- Vulnerability Assessment
- Penetration Assessment
- Final Approval

Task Status

Donut Chart Data:

Status	Percentage
In Progress	12%
New	8%
Closed	45%
Resolved	35%

Pending Requests

Request	Date
No current Pending Requests	

Tasks

#	Title	Priority
2	Set up V2X test bench	High
8	V2X.CAN.5 Normal...	Medium
3	V2X.OS.2 Process P...	Medium
4	V2X.OS.3 Password...	Medium
13	Update Attack Plan	Low

View all tasks

Screen Mockup: iOS Application



Technical Specifications

- Point 1
- Point 2
- Point 3
- Etc...

List the technical components of your project.

Delete this textbox.



System Architecture

Show a diagram that illustrates the overall architecture of your project including how all of the parts and pieces are connected and interact.

See below for examples and instructions.

Delete this textbox.



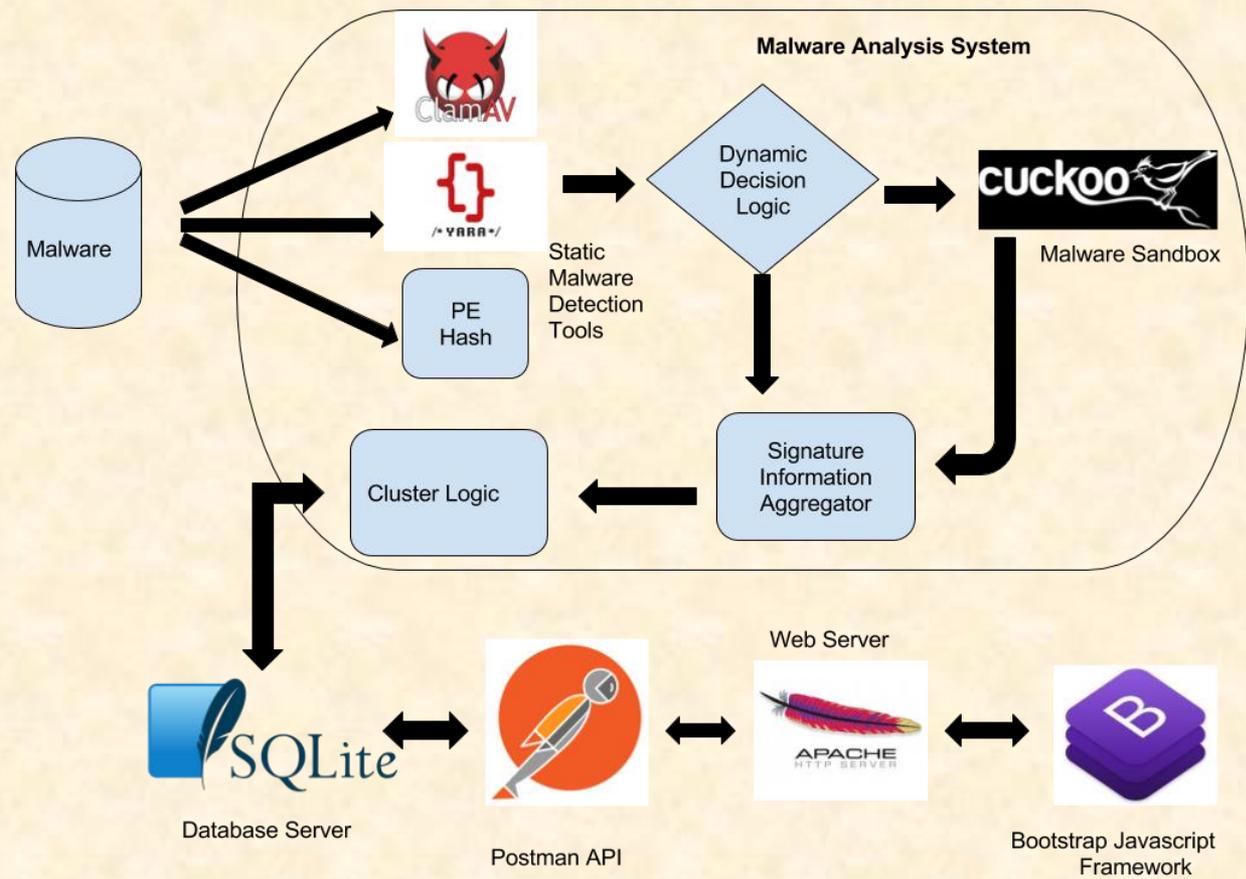
System Architecture

- Draw your system architecture diagram natively in PowerPoint; do not cut-and-paste a diagram from your project plan document.
- Create your system architecture diagram in a separate PowerPoint file.
 - Use a white background with a blank slide layout.
 - Use Home > Arrange > Group to group all of the objects in your diagram into one single PowerPoint object that can be copied-and-pasted.
 - Once grouped, save the diagram as a PNG image so that the entire image will scale including text.
- Use Paint.NET to make the background of your diagram transparent.
 - Download and install it from www.getpaint.net.
 - Copy your diagram into Paint.NET.
 - Select Tool > Magic Wand.
 - Click on a background area.
 - Push the Delete button (on your keyboard).
 - The background area should be a checkerboard pattern.
 - (N.B.: Paint.NET was a capstone project at the University of Washington.)
- Copy-and-paste your PNG image into the slide deck System Architecture slide.
- Ensure that your diagram...
 - is readable (size-wise) when projected,
 - has the correct aspect ratio,
 - is scalable, and
 - is centered vertically (between the green bar in the title and the footer) and horizontally (Use Home > Arrange > Align).

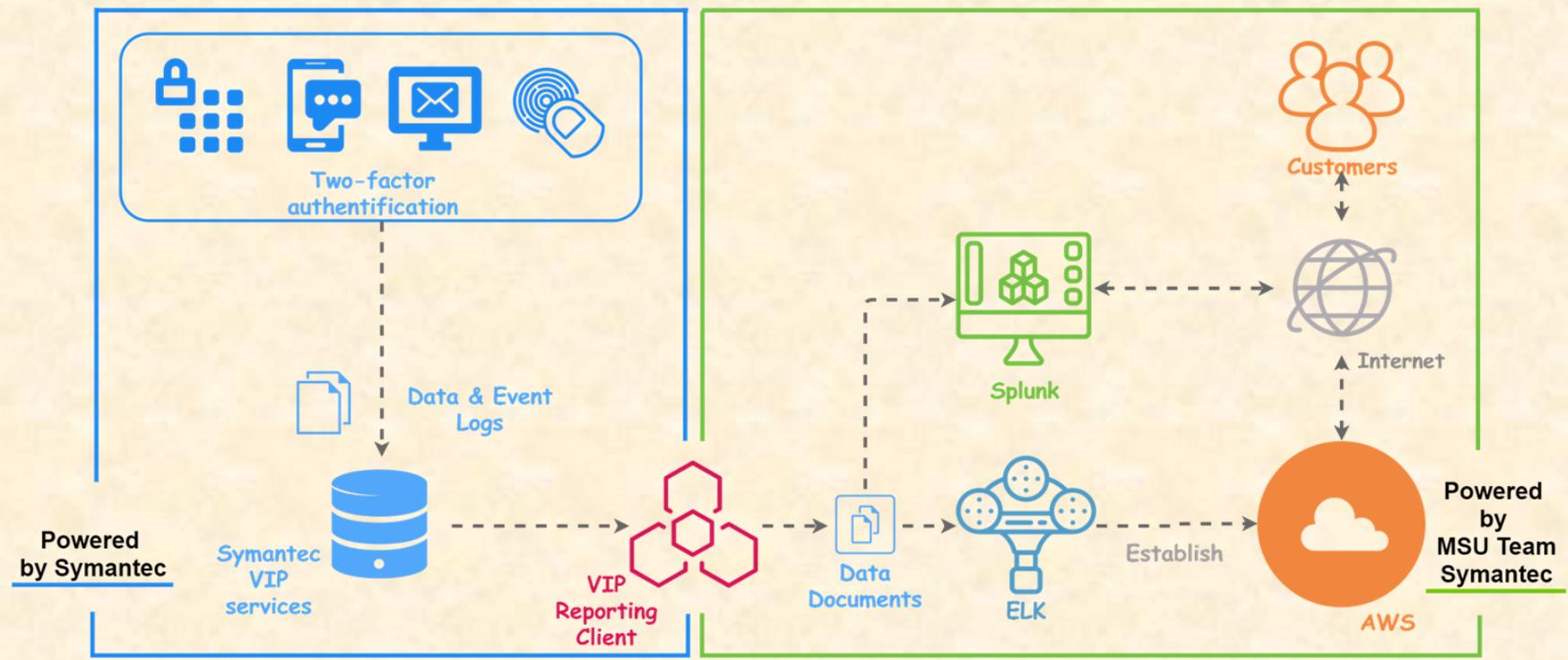
**Read this
carefully.**



System Architecture

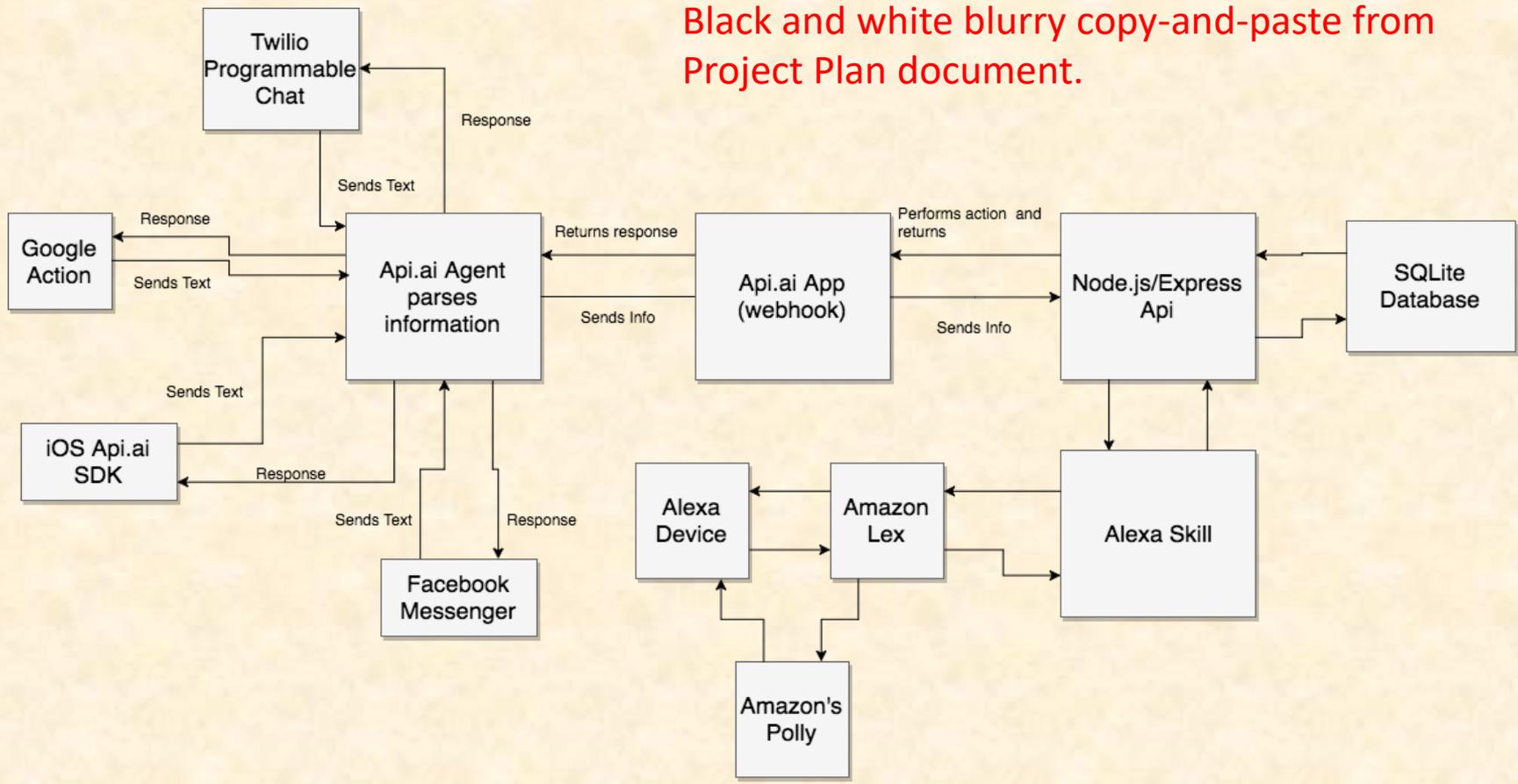


System Architecture

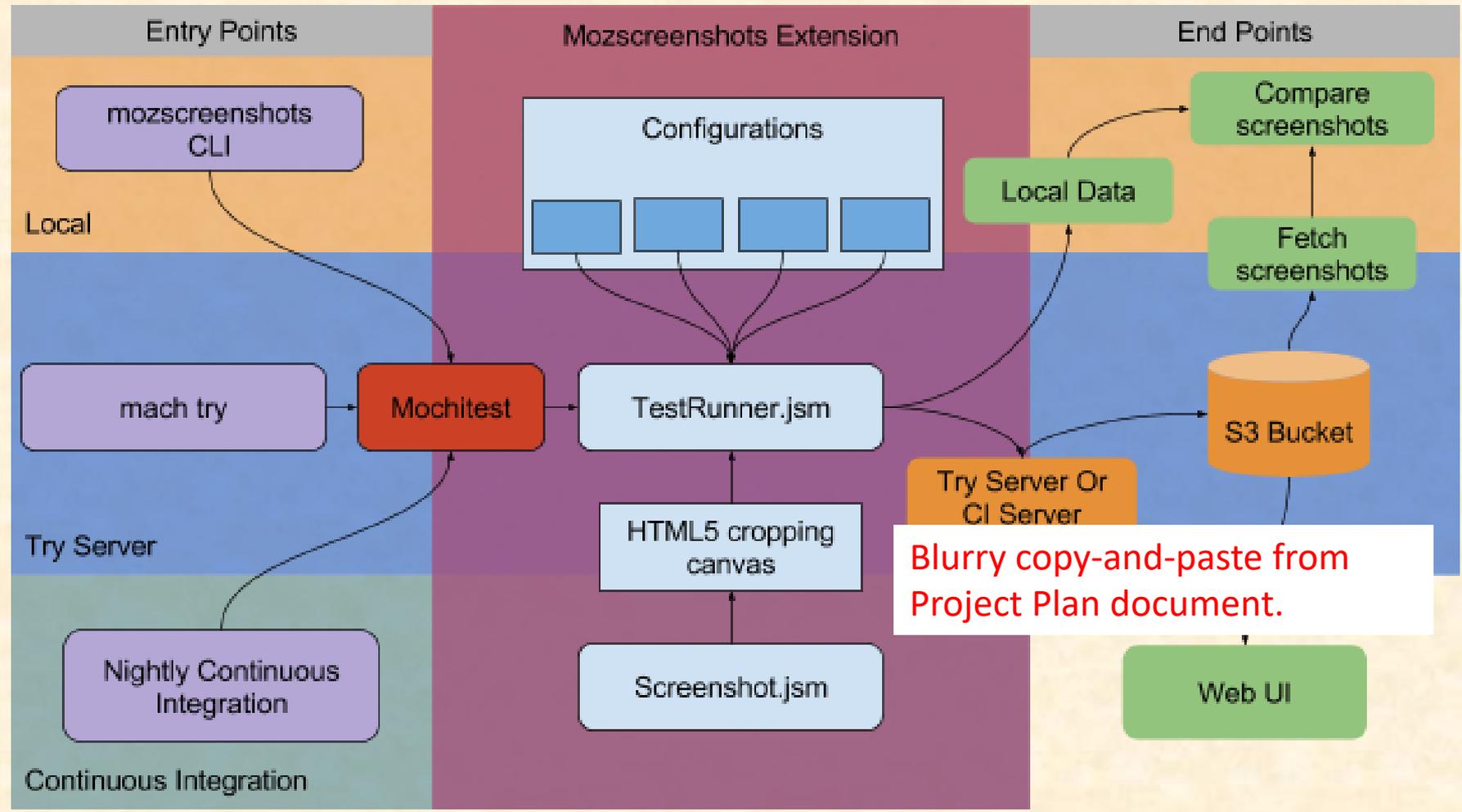


System Architecture

Black and white blurry copy-and-paste from Project Plan document.



System Architecture



Blurry copy-and-paste from Project Plan document.



System Components

- Hardware Platforms

- Point 1
- Point 2
- Point 3
- Etc...

List your hardware and software platforms including all of the technologies that your project will use.

Delete this textbox.

- Software Platforms / Technologies

- Point 1
- Point 2
- Point 3
- Etc...



Risks

- Risk 1
 - Description
 - Mitigation
- Risk 2
 - Description
 - Mitigation
- Risk 3
 - Description
 - Mitigation
- Risk 4
 - Description
 - Mitigation

Articulate your major risks.

For each risk, describe what the risk is and how you plan on mitigating it.

Delete this textbox.



Questions?

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