



# Elijah Juarez

## Software Engineering Co Op

☎ (508) 555-7423 ✉ [elijah.juarez@example.com](mailto:elijah.juarez@example.com)

🌐 [linkedin.com/example/elijahjuarez](https://linkedin.com/example/elijahjuarez) 📍 Worcester, MA 01609

### STRENGTHS

- 🔍 **Traceable Engineering**  
Git branches, test evidence, and issue records kept capstone changes easy to review and explain.
- ✅ **Practical Testing**  
Acceptance criteria guided verification work, and reproducible defects became clear next steps.
- 📊 **Data Integration**  
Connecting sensor and JSON sources taught a useful lesson: clean inputs support reliable interfaces.
- 💬 **Clear Communication**  
Weekly lab updates and project reviews made blockers visible early and helped peers move forward.
- ❤️ **Careful Analysis**  
Statistical review of simulated observations turned raw outputs into findings that informed algorithm discussions.

### SKILLS

[C](#) [Javascript](#) [Lua](#) [Rust](#) [Linux OS](#)

[Angular](#) [Git](#) [Agile methodologies](#)

[Software engineering](#)

[Data integration](#)

[Algorithm analysis](#)

[Statistical analysis](#)

[Software troubleshooting](#)

### SUMMARY

Computer Science student preparing for software engineering work in regulated medical device development, with supervised experience building, testing, integrating, and documenting software for simulated Class III device workflows. Academic projects have connected structured **data sources** with existing application architecture, developed Angular interfaces, evaluated algorithms, and completed verification, validation, and **integration testing** against documented requirements. Practical coding experience includes C, Javascript, Linux, Git, Angular, **data analysis**, troubleshooting, and technical documentation. Research and capstone work strengthened careful task execution, traceable changes, clear test evidence, and communication with faculty and project peers. Coursework and project delivery have provided experience with Agile methods, statistical analysis, Microsoft Office, and software quality practices. This foundation supports thoughtful contributions across **applied science**, AI, and new product development teams.

### EDUCATION

#### Bachelor's Degree in Computer Science

Worcester Polytechnic Institute 🎓 GPA: 4.0 📅 2027 📍 Worcester, MA

**Coursework:** Agile software development, algorithms, statistics, biomedical computing, software testing

### TECHNICAL SKILLS

- **Programming Languages:** C, Javascript, Lua, Rust
- **Web Development:** Angular, JSON, Web UI
- **Operating Systems:** Linux, Linux development tools, Shell utilities
- **Version Control:** Git, Git branches, Commit workflows
- **Software Methods:** Agile, User stories, Code review
- **Testing Practices:** Unit testing, Integration testing, Acceptance testing
- **Medical Software:** Class III medical devices, Medical software, Digital health
- **Data Analysis:** Algorithm analysis, Statistical analysis, Data validation
- **Documentation Tools:** Microsoft Office, Microsoft PowerPoint, Technical documentation
- **Engineering Processes:** Verification, Validation, Troubleshooting

### EXPERIENCE

#### Software Engineering Capstone

Medical Device Software Engineering Capstone 📅 January 2026 - Present 📍 Worcester, MA

Develops a supervised prototype for a simulated **Class III medical device** workflow, supporting requirements analysis, data integration, interface development, testing, troubleshooting, and release documentation.

- Developed modular C and **Javascript** components from functional requirements for a simulated device workflow.
- Integrated two sensor data sources with parsing and **validation** logic for faculty review.
- Built Angular data review interfaces using Linux tools and Git branches for traceable changes.
- Analyzed more than 2,000 simulated observations and documented **algorithm** findings with basic statistics.
- Executed verification and integration tests against **acceptance criteria**, resolving reproducible defects through troubleshooting.
- Maintained design notes, **test evidence**, issue records, and release documentation for capstone reviews.

#### Software Research Assistant

University Research Lab 📅 September 2025 - December 2025 📍 Worcester, MA

Software verification

Integration testing

## LANGUAGES

English Native

Spanish Proficient

## MY CAREER



- Software Engineering Capstone at Medical Device Software Engineering Capstone (8 Months)
- Software Research Assistant at University Research Lab (3 Months)
- Agile Web Software Developer at University Course Project (4 Months)

Supported a biomedical computing study through supervised data processing, validation, statistical review, Javascript utilities, source control, and research documentation.

- Built **C** data processing utilities on Linux for consistent biomedical analysis inputs.
- Implemented record validation checks and compared outputs with reference samples for malformed data.
- Used **Git** commits and faculty review to maintain traceable, maintainable research changes.
- Performed descriptive statistical analysis and summarized distributions, outliers, and data quality observations.
- Created Javascript review utilities, tested defined cases, and documented setup steps for reproducibility.
- Presented progress during lab meetings, communicated blockers, and completed assigned milestones.

### Agile Web Software Developer

University Course Project 📅 January 2025 - May 2025 📍 Worcester, MA

Delivered a supervised team web application through Agile planning, Javascript and **Angular** development, **data integration**, testing, issue tracking, and technical presentation.

- Translated user stories into incremental Javascript and Angular features for a team application.
- Configured Linux development tools and Git branches with peer review and **issue tracking**.
- Connected a **JSON** source with application logic, adding input checks before UI display.
- Wrote unit and integration tests, mapping cases to acceptance criteria and retained evidence.
- Investigated defects by reproducing failures, isolating component behavior, and documenting retest outcomes.
- Presented **architecture**, testing decisions, and release lessons through **Microsoft PowerPoint** documentation.

## PROJECTS

### Biomedical Data Review Utility 📅 2025

Created supervised Javascript and C utilities for reviewing processed biomedical records, checking malformed inputs, comparing reference outputs, and documenting reproducible analysis steps.

### Device Algorithm Evaluation Study 📅 2026

Evaluated algorithm outputs across simulated device observations, applied basic statistical analysis, and prepared findings that supported verification discussions and documented engineering decisions.

## PORTFOLIO

**Title:** Software Project Portfolio

**Link:** [linkedin.com/example/elijahjuarez](https://www.linkedin.com/example/elijahjuarez)

**Description:** Selected academic software projects, technical presentations, and project experience.

## LEADERSHIP & AWARDS

- Dean's List, 2025, recognized sustained academic performance at Worcester Polytechnic Institute.
- Undergraduate Project Presentation Recognition, 2026, honored clear technical communication during project review.
- Academic Merit Scholarship, 2024 to 2026, awarded for continued academic achievement.

## CERTIFICATIONS

- GitHub Foundations Learning Path 📅 2026
- Introduction to Medical Software and Digital Health 📅 2026

## PROFESSIONAL AFFILIATIONS

- Peer Mentor, First Year Computing Study Group, 2025 to 2026, supported student learning through practical guidance.
- Member, Student Software Project Collaborative, 2024 to 2026, contributed to team based software learning.

- Volunteer, Campus STEM Outreach Program, 2025 to 2026, encouraged hands on interest in computing.

## **ADDITIONAL INFORMATION**

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**Work Status** : Authorized to work in United States. No sponsorship required.

## **REFERENCES**

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AVAILABLE ON REQUEST