Aurela Broqi

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EDUCATION

University of Central Florida **Orlando, FL**

Bachelor of Science in Computer Science, GPA: 3.31 Expected Graduation, May 2026

EXPERIENCE

M.E.T.I.L | Software Engineer Intern **Orlando, FL**

Simulation & Training Facility *May 2025 – Present*

- Built a Google Earth-based speech-to-text application in a team of two using C# and Python, enabling dynamic scene rendering in Unity based on user voice commands; **presented project to 10+ number of subject matter experts.**
- Upgraded an existing HaptX project from Unreal Engine 4.27 to 5.4 and integrated SenseGlove 2.5, enhancing system responsiveness and realism for the ORTECC emergency training simulations **used by 10+ interns for continued development.**
- Used GitHub for version control, contributing changes through a branch and merge workflow, and participated in weekly code reviews.

M.E.T.I.L | Backend Research Intern **Orlando, FL**

Simulation & Training Facility *December 2024 – January 2025*

- Analyzed and documented military training elements into quantifiable scenario complexity metrics, supporting backend design planning for a shooting range simulation and **reducing manual tuning efforts by an estimated 50%.**
- Wrote technical documentation linking task outcomes to scenario complexity factors, enabling adaptive difficulty scaling and **improving training alignment with skill level by an estimated 30%.**
- Mapped out backend logic using a RAG-based framework to guide scenario adaptation based on trainee performance and scenario complexity, supporting future implementation of personalized training difficulty.

PROJECTS

Sales Objection Handling AI Tool | React, Node.js, Express.js, Gemini AI API **Orlando, FL**

Solo Project *June 2025*

- Built a web app that transcribes speech and generates real-time, context-based responses to sales objections during client calls.
- Developed a full-stack system with a React frontend and Node.js backend, integrating Express.js and the Gemini API for conversation analysis and response delivery.
- Implemented objection-handling logic using techniques such as urgency, need, scarcity, and assumptive close to improve call flow and engagement.

World.ihardcodebubblesort.com | MERN Stack (MongoDB, Express.js, React, Node.js) **Orlando, FL**

Group Project – Backend & Database *April 2025*

- Developed backend and database architecture for an interactive globe web app where users drop pins to log visited locations.
- Utilized VMware to deploy the project environment; built RESTful APIs in **Node.js/Express** for image uploads, geolocation, login, and registration.
- Created MongoDB schemas for user authentication and pin data, including fields for coordinates, image URLs, descriptions, usernames, and timestamps.
- Documented API endpoints, database schema, and project dependencies to support team collaboration and deployment.
- Collaborated in a team of 6 using **Jira** for planning and **Git/GitHub** for version control and code reviews.

SimpleIR to x86 Compiler | C++ & ANTLR **Orlando, FL**

Solo Project *February 2025*

- Developed a compiler that translates SimpleIR into x86 assembly, implementing parsing, semantic analysis, and code generation in a Linux environment using CLI tools and Git for version control.
- Utilized ANTLR to define grammar and generate an abstract syntax tree for structured compilation.
- Implemented register allocation, branching logic, and pointer operations to enhance execution efficiency.

TECHNICAL SKILLS

- **Programming Languages:** Java, C, C#, Python, HTML, CSS, C++, PHP, JavaScript, Shell Scripting, Node.js.
- **Software & Tools:** Anaconda, AWS, Unix/Linux, VS Code, Tomcat, GitHub, Jira, VMware, VS Code, Postman, MySQL, Bootstrap, Unity, Unreal, SteamVR, Vive, Apache, MongoDB.