

MATTHEW BRUMMUND

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EDUCATION

BS, Computer Systems Engineering (CSE)

2023 - 2026

- Arizona State University, Ira. A Fulton & Barrett Honors College • Tempe, Az • Cumulative GPA: 4.0
- Relevant coursework: Data Structures and Algorithms, Object Oriented Programming, Software Engineering Principles

SKILLS

Programming Languages/Software

- Python, Java, Rust, HTML, CSS, Javascript, React, Streamlit, Terraform (HCL), Bash Scripting, MATLAB
- AWS CDK/SDK, Git, IAC, Linux CLI, PyCharm, Visual Studio, Eclipse IDE, Virtual machines, DiskPart, VirtualBox

AWS Services

- S3, Lambda, EC2, Bedrock (Knowledge Base, Agents, Guardrails), API Gateway (HTTP, REST, Websocket), Cloudfront, Amplify, Opensearch, IAM, Cloudwatch, Rekognition, Eventbridge

WORK EXPERIENCE

ASU Cloud Innovation Center, Associate Cloud Developer

April 2024 - Present

- Crafted AI enabled projects for various clients including Banner Health, Orthodox Union, and more internal projects
- Collaborated on projects in a team setting designed around rapid prototyping • Followed Scrum principles including weekly sprints towards client meetings, and daily standup meetings • Effectively communicated with clients on projects
- Leveraged AWS cloud services to build full-stack applications with: IAC (Infrastructure as code), backend development focused on API's, and frontend deployments build with React and Streamlit

The Tutoring Center, Senior Tutor

December 2021 - August 2023

- Tutored Students (K-12) in their schoolwork and studying • Specialties in math, physics, and writing (~840 hours)
- Trained new tutors in Tutoring Center methods • Communicated with parents and oversaw active tutors

PROJECTS

Orthodox Union Chatbot

- Designed search and summary tool developed in collaboration with Orthodox Union deployed with AWS) • An LLM powered chatbot, leveraging RAG to provide sources which are summarized.
- OU (Orthodox Union) provides translated VTT files from lecture material, which is embedded with Titan V2 and put into Opensearch, an LLM (Claude 3.5) summarizes the sources, and timestamps are given with the original source.
- React based frontend deployed through cloudfront • Resources provisioned with Terraform scripts

DORA Satellite (Deployable Optical Receiver Aperture)

Launches Fall 2024

- Assisted the software development team of DORA (Deployable Optical Receiver Aperture) • a 3U cubeSat fielded by the LoCo Lab at ASU • Launches to orbit fall 2024
- Wrote various Rust functions to support critical information retrieval (reading sensors, and selective telemetry return)
- Handled error checking for edge cases in commands in a zero-fault-tolerant setting, as well as general debugging

Personal Website (www.matthewbrummund.com)

- Developed personal website to serve as an interactive online resume to demonstrate front-end web development skill
- Made with HTML, CSS, and Javascript, and hosted on Github pages • Repository link: MatthewBrummund.github.io