Abel Lu

Cary, NC 27519 • aluprof4@gmail.com • 269-501-7211
linkedin.com/in/aluprof4 • github.com/azn-abel • azn-abel.github.io

OBJECTIVE

Undergraduate computer science student seeking a summer 2024 internship in software engineering, site reliability engineering, DevOps, or related fields. Looking to leverage past internship experience in full-stack development, cloud technologies, and container orchestration to add meaningful value to a team.

EDUCATION

North Carolina State University   Dec 2025
Bachelor of Science in Computer Science, Certificate in Data Science   GPA: 4.00/4.00

Coursework: Software Development Fundamentals, C / Software Tools, Data Structures and Algorithms
Introduction to Data Science (Python/R), Data Science for Cybersecurity (Python)
Campus Engagement: Python Teaching Assistant, Data Science Academy, Society of Asian Scientists and Engineers

SKILLS

Languages: *Proficient* - Python, JavaScript/TypeScript, HTML/CSS, Java, SQL / *Familiar* - C, C#, Go, Rust, R
Libraries/Tools: Docker, Kubernetes, Flask, React, Angular, Java Spring, Prometheus, Grafana, Git, Version Control
Interests: Software Engineering, DevOps, Cloud (AWS, Azure), Container Orchestration, Data Analytics, UI/UX

WORK EXPERIENCE

Full-Stack Platform Engineering Intern   Chapel Hill, North Carolina
Renaissance Computing Institute (RENCI)   *Aug 2023 - Present*
- Develop **full-stack** developer user interface serving **90% of RENCI's** research software engineers
- Implement **Python scripts** to automate secure data fetching for **100+ VMs, DNS records, and namespaces**
- Architect and administer Kubernetes cluster with Docker runtimes to serve **60+ internal users**
- Deploy **3 microservices**, **1 Flask application**, and **1 SQL database pod** on RENCI's internal cloud

Software Engineering Intern   Charlotte, North Carolina
Lowe's Companies, Inc.   *May 2023 - Aug 2023*
- **Reduced downtime** by an average of **1.5 hours** per unit for **70000+ POS units** during updates by developing secure, centralized user interface with **React (JavaScript) and Redux**
- Constructed a **Prometheus + Grafana** metrics dashboard for a **Java Spring backend API**, leading to a **30% faster response time** to major issues, including major performance bottlenecks
- Used **Docker Compose** and the Prometheus, Grafana, and Elasticsearch images to configure a standardized local development environment and best practices guide for a **20+ member team**

SOFTWARE PROJECTS

Digital Portfolio - Personal Website - azn-abel.github.io   *Feb 2023 - Present*
- **Featured 8 personal projects** in a digital portfolio page using **React, HTML/CSS, and JavaScript**
- Created a **personal blog page** and an **EmailJS contact form** to allow visitors to easily contact me

Cloud-Hosted Discord Bot - github.com/azn-abel/OsuBot   *May 2021 - Present*
- Developed chatbot that shows the scores and ranking of **over 19.3 million active Osu! players**
- Deployed bot in **3 load-balanced shards** on Discord's distributed Linux servers
- Leveraged asynchronous programming techniques to **improve API call efficiency by 95%**

Music Visualizer Web Application - github.com/azn-abel/mikus-neon-world   *May 2023 - Jul 2023*
- **Led the 4-month development and deployment** of an online music player with HTML/CSS/JavaScript
- Leveraged Three.js's asynchronous loader to **reduce texture loading time of 13 custom assets by 70%**
- **Created and assigned 50+ tickets** to guide team through the software development lifecycle

Data Analysis + Visualization w/ Python - github.com/azn-abel/ramen-ratings   *May 2023 - May 2023*
- **Analyzed 2500+ rows** of Kaggle's open-source ramen data using Python and Jupyter Notebooks
- Assessed quality of ramen from **30+ countries** over a span of 10 years
- Cleaned data with **pandas** and **numpy**, created plots and histograms with **matplotlib**