

EDUCATION

North Carolina State University - Raleigh, NC
Bachelor of Science in Computer Science

May 2026
GPA: 4.00/4.00

SKILLS

Languages: Python, Java, JavaScript, TypeScript, Go, HTML, CSS, C, SQL

Libraries/Tools: Docker, Kubernetes, Prometheus, Grafana, Splunk, Flask, React, Svelte, Spring Boot, Git

Certifications: AWS Associate Solutions Architect, Certified Kubernetes Application Developer, Certified Kubernetes Administrator

EXPERIENCE

Site Reliability Engineering Intern

Apple Inc.

Cupertino, California
May 2024 - Aug 2024

- Developed and deployed a **Python** automation tool to automatically remediate production issues
- Automated the diagnosis of **PagerDuty** alerts by analyzing **Splunk** logs using a **Python** client library
- Stored usage data in **PostgreSQL** for historical analysis to validate the performance of the tool

Undergraduate Research Assistant

NC State Department of Computer Science

Raleigh, North Carolina
Jan 2024 - May 2024

- Developed and deployed 3 **Python** computer vision microservices and a **React + TypeScript** frontend
- Instrumented services with **Prometheus** and **OpenTelemetry** exporters for observability and tracing
- Installed Operators and maintained control plane components on a 3-node bare metal **Kubernetes** cluster

Platform Engineering Intern

Renaissance Computing Institute (RENCI)

Chapel Hill, North Carolina
Aug 2023 - Apr 2024

- Developed infrastructure search engine in **Python** and **React** to help engineers migrate from **VMs** to **Kubernetes**
- Configured 3 CronJobs to automate data fetching for 100+ **VMs**, **Kubernetes** namespaces, and DNS records
- Dockerized and deployed **React** apps, **Flask** APIs, and **Redis** databases onto an on-prem **Kubernetes** cluster

Software Engineering Intern

Lowe's Companies, Inc.

Charlotte, North Carolina
May 2023 - Aug 2023

- Developed a self-service POS management portal for store admins with **TypeScript**, **React**, and **Redux**
- Created a **Prometheus + Grafana** metrics dashboard for a **Java** Spring API, improving incident response time by 30%
- Used **Docker** Compose to configure a containerized development environment for a 20+ member team

EXTRACURRICULARS

React Native Team Lead

NCSU App Development Club

Raleigh, North Carolina
Jan 2024 - Present

- Design mobile apps and build wireframes using **Figma** and for a team of 16 NC State students
- Develop **cross-platform applications** and team workshops using **React Native**, **Expo**, and **VSCode**

PROJECTS

Kubernetes Documentation (Open Source) - github.com/azn-abel/kubernetes-website

Dec 2023 - Present

- Successfully merged 4 **Hugo** pull requests into the Kubernetes website and documentation repository
- Participate in issue discussions to learn about the open source contribution and code review process

Digital Portfolio - abellu.com

Feb 2023 - Present

- Featured 8 personal projects and 4 certifications in a digital portfolio page using **React**, **HTML/CSS**, and **JavaScript**
- Rebuilt the website using **SvelteKit** and deployed it on **AWS EC2**, using certbot for TLS and **Route 53** for DNS

Music Player w/ Real Time Lyrics - github.com/azn-abel/mikus-neon-world

July 2023 - Aug 2023

- Led 4-month development and deployment of an online music player built using **HTML/CSS/JavaScript**
- Leveraged **Three.js** asynchronous loader to reduce texture loading time of 13 custom assets by 70%

Cloud-Hosted Discord Bot - github.com/azn-abel/OsuBot

May 2021 - Aug 2023

- Developed an interactive chatbot in **Python** for displaying osu! score trends for over 19.3 million players worldwide
- Deployed bot onto an **AWS EC2** instance and stored user preferences in a serverless **PostgreSQL** database