

Miguel Alonso

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EDUCATION

Virginia Tech Polytechnic Institute of Technology, Blacksburg VA

Expected Graduation: May 2023

BS Computer Science, Minor: Mathematics, GPA: 3.68

WORK AND INTERNSHIP EXPERIENCE

SDE Intern | Amazon, Seattle, WA

May 2022 – August 2022

Fire TV Personalization Team

- Designed, built, and deployed full stack internal visualization tool to diagnose errors for over 20M active users
- Incorporated Handlebars, jQuery, HTML, & CSS with a Spring MVC REST framework to interact with APIs
- Utilized a build server, integration tests, and continuous deployment for a fully automated workflow

Software Engineer Co-Op | Peraton, Blacksburg, VA

Jan 2022 – May 2022

Space and Intelligence Sector

- Integrated Hibernate (ORM) into existing Spring Boot PostgreSQL application for transparent persistence
- Designed and implemented a PubSub for multi-modal traffic simulation in full stack visualization tool

APP SDE Intern | Amazon, Arlington, VA

May 2021 – August 2021

Fire TV Catalog Ingestion Team

- Designed, built full stack data visualization tool to track and verify ingestion and validation with existing catalogs
- Utilized AWS DynamoDB, AWS CloudWatch, AWS CloudFront (CDN), and AWS S3 within React application

Undergraduate Teaching Assistant (UTA) | Blacksburg, VA

August 2021 - Present

Department of Computer Science, Virginia Tech

- Computer Organization 2: Fluent with MIPS Architecture, Assembly, C, Digital Logic, Pipelining, Caches, Linux
- Assisted with class preparation, course materials, and facilitated feedback for 375 undergraduate students

Center for the Enhancement of Engineering Diversity (CEED) Peer Mentor

April 2022- Present

College of Engineering, Virginia Tech

- Coordinated events focused on aiding freshman engineering students' transition to college
- Managed a group of 10 first year engineering students by providing 1 on 1 personal support

PROJECTS

[Senior Design], Generic Containers, Project Manager

August 2022 - Present

- Designed and implemented software for Generic Containers for Department of Computer Science @ VT
- Configure Docker and Kubernetes with CAS for deployment and use by future containerization projects
- Exhibited full project management experience: Budget, Customer Interaction, Agile, Scrum, Jira

[Personal], Networked Multiplayer Game

June 2019 – July 2021

- Designed and implemented multithreaded client server application for strategy game named “Stratego”
- Researched multithreading, sockets, streams, conditionals, and concurrency

[Personal], Genetic Pathfinding Algorithm

June 2020 – September 2020

- Developed a genetic pathfinding simulation tool with randomized structures in Python
- Researched genetic algorithms, A* pathfinding, calculating fitness, neural networks, and NEAT

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, JavaScript, TypeScript

Technologies: React, HTML, CSS, AWS, jQuery, Handlebars, Node.js, REST, Spring Boot, Spring MVC, JUnit Tests, Hibernate, SQL, PostgreSQL, DynamoDB, Docker, Kubernetes, Linux, Ubuntu, CentOS, Bash, Git, Jira, Apache Maven

Methods: Object Oriented Programming, Agile Software Development, Data Structures & Algorithms

PRINCIPAL EXTRACURRICULAR ACTIVITIES

Computer Science Ambassador | Blacksburg, VA

April 2022 – Present

Department of Computer Science, Virginia Tech

- Represented and spoke on behalf of the Department of Computer Science to incoming and prospective students

CERTIFICATIONS & AWARDS

AWS Certified Cloud Practitioner (CFL) : Credential ID: 3L0W4N7DHNQEYYS1

Eagle Scout, Boy Scouts of America