

Aaron McCarthy

Senior Software Engineer

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ABOUT

Expert in architecting high-availability, asynchronous systems for seamless, reliable operations. Proficient across diverse technologies and tools, ensuring solutions that exceed expectations. Proven ability to craft innovative, robust solutions for any challenge.

EXPERIENCE

Lumen

Sr. Software Engineer

Seattle WA

2021 - present

- Created event driven server recommissioning pipeline with Python, RabbitMQ, Telemetry
- Reduced recommissioning time by 30% with increased reliability
- Built Automated Azure Hyper Converged Infrastructure deployment pipeline
- Automated delivery of pre-configured virtual HCI clusters to customers

Boeing

Software Engineer

Everett WA

2019 - 2021

- Designed and built Java virus scanning API microservice with RabbitMQ
- Reduced scan time by 60%, increased reliability and visibility of process and outcomes
- Built Azure DevOps CI/CD pipelines for .NET apps, replaced manual deployments
- Lead Gradle-ization of monolithic Java build process
- Reduced build time by 80% and saved money on licensing fees

TechLink

Software Engineer Intern

Bozeman MT

2017 - 2019

- Developed automated testing framework in C# with Selenium for Department of Defence
- Wrote automated tests with MSTest, ran in cloud on Browserstack
- Lead design work for new desktop application, mentored new interns
- Used GitLab's CI/CD pipeline to enforce testing standards

EDUCATION

Montana State University

BS in Computer Science

Bozeman MT

2018

PROJECTS

Biomedle

- Daily geography quiz game written in Node with React and DynamoDB on AWS
- Crafted an intuitive React front end, optimizing navigation with component-based architecture
- Implemented automated Python data pipeline to create and deploy database

Currency Converter

- Created Angular app with Bootstrap hosted on AWS to convert with real time exchange rates
- Asynchronously fetches exchange rates in JSON from cryptocompare.com's API

IMDB Movie Data Analysis

- Imported imdb.com's data into custom MySQL database
- Created Naive Bayes and Quadratic Regression models with sklearn in Python to make predictions
- Found strong relationship correlating movie score and lead actors age

ListShare

- Built a website using Django hosted on AWS
- Created interface with HTML/CSS, managing data with SQLite

Twitter Reply Bot

- Built a Twitter bot in Python that monitors other accounts
- Asynchronously sends replies to monitored accounts when they tweet

Pizza Ranch Adventure

- Created a side-scrolling game in Python using Pygame
- Implemented jumping mechanics, multiple music tracks, collision detection

arm@ML

- Implemented RBF and MLP networks to approximate 5 variations of Rosenbrock
- Compared effectiveness of Backpropagation, Evolution Strategy, Differential evolution, Genetic algorithm
- Clustered data with k-means clustering, DB-Scan, particle swarm, and ant-colony optimization
- Used multiple UCI datasets for each comparison, all code implemented in Java

Skills

- **Programming Languages:** Python, Java
- **Cloud Platforms:** AWS, GCP, Azure,
- **Infrastructure as Code:** Terraform
- **CI/CD:** Azure DevOps, GitLab CI/CD
- **Database Systems:** SQL, NoSQL
- **Distributed Services/Messaging Systems:** RabbitMQ
- **Containerization/Orchestration:** Kubernetes, Docker