AARON MCCARTHY

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SUMMARY

Software Engineer with expertise using AWS to architect could based 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.

EDUCATION

Montana State University   **September 2014 - May 2018**
Bachelor's, Computer Science

PROFESSIONAL EXPERIENCE

Lumen   **Seattle, WA, USA**
Sr. Software Engineer   *November 2021 - November 2023*
- Created event driven server recommissioning pipeline with Python, RabbitMQ, Telemetry
- Dockerized Python event driven architecture reduced server down time by 30% with increased reliability
- Built Python and Ansible Automated Azure HCI deployment pipeline
- Automated delivery of pre-configured virtual HCI clusters to customers

The Boeing Company   **Seattle, WA, USA**
Software Engineer   *January 2019 - November 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

TechLink   **Bozeman, MT, USA**
Software Engineer Intern   *January 2017 - November 2018*
- Developed automated testing framework in C# with Selenium for Department of Defense
- Lead design work for new desktop application, mentored new interns
- Used GitLab's CI/CD pipeline to enforce testing standards

PROJECTS & OUTSIDE EXPERIENCE

Biomedle
- React web app hosted on AWS Amplify using API Gateway and AWS Lambda as back end
- Lambda functions call AWS DynamoDB to retrieve data and S3 to retrieve images
- AWS IAM used to securely manage permissions and roles, AWS Route 53 provided domain
- Crafted an intuitive React front end in TypeScript, optimizing navigation with component-based architecture

Biomedle_data
- Image processing data pipeline to create back end resources in AWS for Biomedle
- Creates and fills AWS DynamoDB database, using AWS SDK and Google Earth Engine data
- Uses GEE data processing to create JSON describing proportions of environments per country
- Populates AWS S3 with images of every countries environmental zones

Currency Converter
- Created Angular app on AWS S3 using TypeScript and Bootstrap to convert with real time exchange rates
- Asynchronously fetches exchange rates in JSON from cryptocompare.com's API

IMDB Data Pipeline
- 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

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

Skills: Python, React.js, TypeScript, Node.js, AWS, DynamoDB, JavaScript, Django, S3, Docker, DevOps, REST APIs, Kubernetes, Ansible, AngularJS, Agile, Java, Data Science, C#, jQuery, Git, HTML/CSS, PowerShell, MySQL, NumPy, Postgres, RabbitMQ, SCRUM, Selenium, Tensorflow, NoSQL, FastAPI