Haadi Razzak

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Experience

Amazon Web Services **Aug 2025 – Present**

Software Development Engineer *Seattle, WA*

- Contributed within the **Data Center Automation** organization to build internal tooling for **data center health monitoring**, supporting operations across **nearly 1,000 data centers worldwide**
- Created an internal, team-specific package using **AWS CDK (Python and TypeScript)** to standardize **CloudWatch alarm creation** as part of an **Operational Excellence** initiative, defining a consistent alarm taxonomy by **service ownership and severity levels** to improve alert clarity, maintainability, and on-call readiness
- Expanded the team's service ownership from **commercial AWS** to **Amazon Dedicated Cloud (ADC)**, re-architecting systems and performing extensive validation to prevent **alarm data leakage** between private ADC data centers and commercial environments; partnered with **Controls** and **ADC teams**, led **User Acceptance Testing (UAT)**, and enabled adoption by **100+ ADC engineers**

BMC Software **May 2024 – Aug 2024**

Machine Learning Engineer Intern *Santa Clara, CA*

- Analyzed previous server configurations using time series modeling, achieving a **19% improvement in fleet health and a 15% reduction in server downtime** through fine-tuning the Llama 2 model
- Leveraged Generative AI with tools like Kustomize to enhance Kubernetes deployments, drawing on historical user data and metrics such as server response time, CPU usage, and container health status

PayPal **May 2023 – Aug 2023**

Software Integration Engineering Intern *San Jose, CA*

- Created a system using NodeJS and Braintree to smoothen the external app payment integration process for high volume merchants, **enabling a smoother payment process for 100+ million users**
- **Collaborated with 20+ merchants** to enhance checkout page customization, optimizing payment interfaces by integrating fraud protection, alternative payment methods, and webhook automation for seamless transactions

USC CPS-VIDA Lab **Aug 2024 – May 2025**

Research Assistant *Los Angeles, CA*

- Engaged in research on decentralized strategies for Multi-Agent Path Finding (MAPF) under Merve Atasever, focusing on navigating agents in dynamic, obstacle-rich environments where each agent operates with a limited field-of-view
- Pre-training agents with reinforcement and imitation learning techniques to recognize and proactively avoid potential conflicts, such as collisions, while operating within constrained fields-of-view in dynamic environments

Education

University of Southern California **Aug 2021 – May 2025**

Bachelor of Science in Computer Science *Los Angeles, CA*

Relevant Coursework: Operating Systems, Data Structures and Algorithms, Networking, Machine Learning, Linear Algebra, Algorithm Design, Software Development, Prob/Stats for CS.

Certificates: Supervised Machine Learning: Regression & Classification; AWS Certified Cloud Practitioner

Technical Skills

Languages and Technologies: Python, TypeScript, JavaScript, C++, C, Rust, AWS, Node.js, React, PyTorch, TensorFlow

Projects

TroyLabs | *React Native, MongoDB* **Jan 2024 - May 2025**

- Selected from over 400 applicants to join an elite cohort of 24 students, partnered w/ Google, AWS, and Robinhood
- Played a key role in migrating Hatchet's application to React Native, connecting it seamlessly to backend services to enhance real-time tracking and monitoring of firefighter locations and vital signs, supporting the platform's mission to improve safety and response times in emergency situations

NBA MVP Predictor | *PyTorch, RandomForestRegressor* **Jul 2024**

- Built an NBA MVP predictor using PyTorch and a RandomForestRegressor, analyzing **60 years of historical NBA data** to extract performance metrics and increase prediction accuracy by 25% compared to existing model
- Validated model performance through backtesting, achieving a **mean average precision of 85%** and significantly reducing error rates, accurately ranking potential MVPs year over year