SUMMARY

Machine learning scientist with 5+ years experience and a proven track record building and deploying AI systems for **robotics**, **computer vision**, **and natural language processing**.

EXPERIENCE

Senior Data Scientist

Amazon Robotics

North Reading, MA, USA Jul 2020 – Present

- Developed machine learning and optimization systems for robotic manipulation and path planning
- Responsible for performance improvements of up to +25% and estimated savings of +\$100MM
- Recipient of Inventor Award (x2)

Data Scientist

Toronto, ON, Canada Feb 2017 – Jul 2018

Hubdoc

- Developed machine learning system for natural language processing of financial documents
- Deployed to production with 99% precision at 95% recall, while reducing extraction time by 99.99%

EDUCATION

Harvard University

Cambridge, MA, USA

Master of Science in Data Science (GPA: 4.0)

Aug 2018 – May 2020

• Scholarship in Applied Computation, Distinction in Teaching

University of California, Berkeley

Berkeley, CA, USA

Bachelor of Science in Industrial Engineering & Operations Research (GPA: 3.9)

Aug 2012 – May 2016

High Honors (magna cum laude), Frank Kraft Award, Phi Beta Kappa, Tau Beta Pi, Alpha Pi Mu

PROJECTS

Grasp Learning for Robotic Item Manipulation

Amazon Robotics

- Developed Vision Transformer and PointNet++ models for learned grasp generation and ranking
- Achieved +22% improvement in grasp evaluation performance

Computer Vision for Robotic Damage Detection

Amazon Robotics

- Developed ResNet-based visual anomaly detection model for damage detection
- Achieved +25% improvement in damage detection performance

Simulation-Based Optimization for Robotic Path Planning

Amazon Robotics

- Developed simulation-based optimizer for path planning on fleets of thousands of mobile robots
- Achieved +10% improvement in robotic system throughput

Physics-Informed Neural Networks

Harvard University

- Developed generative adversarial networks for solving differential equations
- Workshop paper published at ICML 2022

SKILLS

- Languages: Python, C++, Javascript/Typescript, SQL
- Libraries: PyTorch, Keras/Tensorflow, OpenCV, Open3D, Pandas, NumPy, SciPy, Scikit-Learn, React
- Platforms: AWS, Docker, Firebase, Linux, MacOS