Dylan Labatt Randle

Website | LinkedIn | GitHub

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 — North Reading, MA, USA
Amazon Robotics — *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
Hubdoc — *Feb 2017 – Jul 2018*

- 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