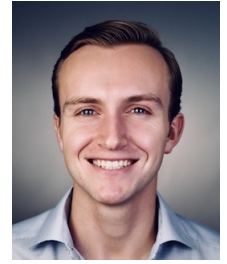# Dylan L Randle

Website · LinkedIn · GitHub · Scholar

SUMMARY

Technical lead with 7+ years experience in AI, robotics, and machine learning. Expert in developing closed-loop policies for dexterous manipulation using imitation and reinforcement learning. Proven track record building and deploying AI/ML systems for robotics, computer vision, and natural language processing.

EXPERIENCE

Amazon Robotics   North Reading, MA, USA
Senior Applied Scientist   *Apr 2024 – Present*

- Tech lead for closed-loop imitation and reinforcement learning systems for dexterous bimanual manipulation.
- Delivered Amazon's first bimanual manipulation policies, achieving a 92% success rate on unseen items. Technology demonstrated to Jeff Bezos, Andy Jassy, and the Board of Directors.

Senior Data Scientist   *Apr 2023 – Apr 2024*

- Developed production ML systems for robotic manipulation (grasp generation, damage prediction, box packing).
- Deployed first learned action model for Amazon's Sparrow robot. Delivered performance improvements of +35% and savings of $10 million/year.

Data Scientist II   *Jul 2020 – Apr 2023*

- Developed ML path planning optimization system for large-scale mobile robot fleets.
- Published research demonstrating a 15% throughput increase, identifying $150 million in annualized efficiency gains for mobile robot fleets.

Data Scientist I   *Jun 2019 – Aug 2019*

- Developed AutoML system for training, evaluating, and interpreting ML models trained on trillion-row robotics datasets.
- Used by multiple scientists to speed up research and analysis workflows.

Hubdoc   Toronto, ON, Canada
Data Scientist   *Feb 2017 – Jul 2018*

- Started and led ML team from ideation to $70 million USD acquisition.
- Developed ML-based NLP system for automated data extraction from unstructured financial documents.
- Reduced data extraction time from hours to seconds.

EDUCATION

Harvard University   Cambridge, MA, USA
Master of Science in Data Science (GPA: 4.0)   *Aug 2018 – May 2020*

- Thesis: *"Unsupervised Neural Network Methods for Solving Differential Equations"*.
- Recognized with Scholarship in Applied Computation and Distinction in Teaching.
- Research and coursework focused on machine learning.

University of California, Berkeley   Berkeley, CA, USA
Bachelor of Science in Industrial Engineering & Operations Research (GPA: 3.9)   *Aug 2012 – May 2016*

- Recognized with High Honors (*magna cum laude*) and Frank Kraft Award.
- Inducted into Phi Beta Kappa, Tau Beta Pi, Alpha Pi Mu.
- Coursework focused on statistics and optimization.

Publications

- **Demonstrating Multi-Suction Item Picking at Scale via Multi-Modal Learning of Pick Success.** C Wang, J van Baar, C Mitash, S Li, **D Randle**, W Wang, S Sontakke, K E Bekris, K Katyal. RSS 2025.

- **MuST: Multi-Head Skill Transformer for Long-Horizon Dexterous Manipulation with Skill Progress.** K Gao, F Wang, E Aduh, **D Randle**, J Shi. ICRA 2024.

- **Learning Object Properties Using Robot Proprioception via Differentiable Robot-Object Interaction.** PY Chen, C Liu, P Ma, J Eastman, D Rus, **D Randle**, Y Ivanov, W Matusik. ICRA 2024.

- **Avoiding Object Damage in Robotic Manipulation.** E Aduh, F Wang, **D Randle**, K Wang, P Shah, C Mitash, M Nambi. IROS 2024.

- **DEQGAN: Learning the Loss Function for PINNs with Generative Adversarial Networks.** B Bullwinkel*, **D Randle***, P Protopapas, D Sondak. ICML 2022, AI for Science. *Equal contribution.

- **Unsupervised Learning of Solutions to Differential Equations with Generative Adversarial Networks. D Randle**, P Protopapas, D Sondak. arXiv:2007.11133, 2020.

- **Unsupervised Neural Network Methods for Solving Differential Equations. D Randle**. Master's Thesis, Harvard University, 2020.

Projects

- **Rubik's Cube Solving Robot:** A robot that autonomously solves a Rubik's cube in under 3 seconds. Leverages integrated perception to inspect the cube, Kociemba's algorithm to plan a solution, and stepper motors to solve it. Demo available on my [website.](website)

Technical 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.