

James Herman, Software Engineer

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PROFILE

Dedicated engineer with a passion for learning new technologies, crafting innovative solutions, and building dependable software. Experienced across diverse machine learning domains, proficient in designing high-performance distributed simulation systems, and a record of delivering production-grade software.

[Personal Site](#), [LinkedIn](#), [GitHub](#)

EDUCATION

Aug 2019 — May 2021	Carnegie Mellon School of Computer Science M.S. Computational Data Science GPA 3.86/4.00	Pittsburgh, PA
Aug 2012 — May 2017	Purdue University B.S. Statistics, B.S. Actuarial Science Summa Cum Laude GPA 3.96/4.00	West Lafayette, IN

SKILLS

Languages: Python, Rust (PyO3), C/C++ (PyBind11), Unix Shell
ML: PyTorch, Tensorflow, Keras, HuggingFace, Tianshou, W&B, scikit-learn
Deep Learning: computer vision, reinforcement learning, multimodal ML, NLP
Computing: Git, AWS, Docker, Kubernetes, Airflow, Kafka, Spark, GCP

PROFESSIONAL EXPERIENCE

Sep 2022 — Present	Software Engineer & Tech Lead, Swish Analytics <ul style="list-style-type: none">Leading the re-architecture of core odds-making software for in-game betting and custom parlaysReduced production latency by 20x and cost by 70% by migrating performance-critical simulation code to Rust with seamless integration to existing modeling, testing, and deployment infrastructureAWS, Rust, PyO3, Python, Redis, Kubernetes, Airflow, GitHub	New York, NY
Aug 2021 — Sep 2022	Backend & Machine Learning Engineer, Intellimize <ul style="list-style-type: none">Designed & shipped LLM-based text generation micro-service for customer website marketingFully automated multi-service integration tests suites into CI/CD with container orchestration toolsAWS, Python, OpenAI, FastAPI, ECS, RDS, Tensorflow, Airflow, Bitbucket	New York, NY
Jan 2021 — Aug 2021	Staff Researcher, Carnegie Mellon University <ul style="list-style-type: none">Founded CMU Roborace's team which raced Formula E inspired autonomous race cars, leading to numerous capstone research efforts spanning over 20 teammates and advisorsBuilt a distributed RL training system for autonomous racing agents with CMU's Parallel Data Lab	Pittsburgh, PA

PUBLICATIONS

2021	J. Herman , J. Francis, S. Ganju, B. Chen, A. Koul, A. Gupta, A. Skabelkin, I. Zhukov, A. Gostev, M. Kumskey, E. Nyberg. Learn-to-Race: A multimodal control environment for autonomous racing. <i>IEEE/CVF International Conference on Computer Vision (ICCV)</i> , 2021.
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PRIOR EXPERIENCE

Jun 2017 — Jun 2019	Pricing Actuary, One America Financial Partners <ul style="list-style-type: none">Modeled hybrid life & long-term care insurance with distributed, stochastic simulationsDesigned novel joint LTC pricing methodology resulting in a \$10.5 million impact on annual premiums	Indianapolis, IN
May 2017 — Aug 2017	Outside Linebacker, New York Giants <ul style="list-style-type: none">Invited to Rookie Mini Camp; played in Preseason Week 1 game vs. Pittsburgh Steelers	East Rutherford, NJ