

# Dhruv Srikanth

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London, UK

## EDUCATION

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### The University of Chicago

Grad. April 2023

Master of Science, Computer Science (Machine Learning, High Performance Computing), GPA: 3.7

Relevant Coursework: Algorithms, Data Analytics, High Performance Computing, Parallel Programming, Compilers

### Toyota Technological Institute Chicago

Grad. April 2023

Joint coursework part of UChicago Master of Science, Computer Science

Relevant Coursework: Machine Learning, Computational Learning Theory [[paper](#)], Deep Learning [[paper](#)] [[code](#)]

### PES University

Grad. Jun 2021

Bachelor of Technology, Electronics & Communication Engineering (Signals & Systems), GPA: 3.9

Relevant Coursework: Computer Vision, Computer Architecture, Machine Learning, Image Processing, Signals Analysis

**Programming Languages:** Python, C/C++, GoLang, Java, MATLAB, SQL, JavaScript, Mojo, Bash, Lua

**Frameworks/Libraries:** PyTorch, TensorFlow, Hugging Face, Jax, OpenAI API, Ray, CUDA, Triton, MPI, OpenMP, Kubernetes, Pandas, Scikit-learn, Docker, Node, vLLM

## WORK EXPERIENCE

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### Weco AI

London, UK

Founding Engineer

May 2024 – Present

- **Developed AIDE, the best performing ML coding agent** ([OpenAI's evaluation](#)) & **R&D coding agent** ([METR's evaluation](#)) outperforming top Human scientists from OpenAI, Google DeepMind, Anthropic, Stanford, Berkeley, CMU and MIT [[package](#)] [[paper](#)]
- Leading research on improving LLM code generation through interaction scaling and evolution-based tree search policies for kernel engineering, model development and prompt optimization
- Trained LLMs (Mistral, Mixtral, Llama 3) for code generation using SFT, qlora & quantization with HuggingFace and setup inference pipeline to locally host models using vLLM
- Leading core backend - architected backend system for AIDE using GCP and Vercel for autoscaling & load balancing, Postgres for database management and FastAPI for the backend API
- Co-leading consumer tools - developed Python CLI for interacting with AIDE backend API enabling customers to iteratively optimize their code using AIDE LLM agent

### Auton Lab: Carnegie Mellon University, Robotics Institute

Pittsburgh, USA

Research Programmer | Dr. Artur Dubrawski

May 2023 – Mar 2024

- Developed AI models & graph-based algorithms for semantic segmentation and identification of vessel bifurcations deployed on autonomous robotic arm for needle insertion in animal subjects during robot assisted surgery [[paper](#)]
- Trained and fine-tuned **multimodal foundation models** over distributed clusters (transformers, VAEs, autoencoders, bayes nets) for detecting patient vitals through drones deployed during disaster relief
- Published AutonFeat [[code](#)] [[docs](#)]; distributed automatic featurization library for time series analysis (forecast + classification)
- Developed RNNs, LSTMs, transformers with 0.81 AUC with UPMC doctors, **improving renal failure outcomes for ICU patients**

### UChicago Booth Center for Applied Artificial Intelligence

Chicago, USA

Machine Learning Researcher | Dr. Sendhil Mullainathan

Apr 2022 – Mar 2023

- Trained 50+ models for identifying, measuring and mitigating algorithmic and architectural bias in ML models via transfer learning
- Empirically proved presence of inductive biases (induced correlations between covariates – e.g. race, gender) in pretrained (ImageNet) weights and ubiquitous large vision model architectures (AlexNet, VGG, ResNet, DenseNet, ViT, Diffusion models)
- Developed recommendation engine, and API that utilizes user context to modify dynamic knowledge graphs

### Myelin Foundry

Bangalore, India

Machine Learning Engineer (Intern)

Jan 2021 – July 2021

- Created new revenue stream by developing real-time competitor analysis tool with language models & generative AI

- Developed and deployed full stack web applications with Python, MySQL, HTML, CSS, JavaScript, Flask, Azure and AWS VMs

## General Electric

Machine Learning Engineer (Intern)

Bangalore, India

June 2019 – Aug 2019

- Reported 4+ leading causes of defects across X-ray insert manufacturing process through ML data analysis with Pandas and sklearn
- Developed-deployed X-ray defect identification model (84% accuracy) with Random Forest & Naïve Bayes classifier

## PUBLICATIONS

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Z. Jiang, D. Schmidt, **D. Srikanth**, D. Xu, I. Kaplan, D. Jacenko, and Y. Wu. AIDE: AI-driven Exploration in the Space of Code. *arXiv preprint arXiv:2502.13138*, 2025. [[paper](#)] [[code](#)]

C. G. Morales, **D. Srikanth**, J. H. Good, K. A. Dufendach and A. Dubrawski, "Bifurcation Identification for Ultrasound-driven Robotic Cannulation," 2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). [[paper](#)]

P. Shukla, **D. Srikanth**, L. Cohen, and M. Turk. Utilizing Adversarial Examples for Bias Mitigation and Accuracy Enhancement. *arXiv preprint arXiv:2404.11819*, 2024. [[paper](#)]

S. Bidnur, **D. Srikanth**, and S. Gurugopinath. Resource-Conscious High-Performance Models for 2D-to-3D Single-View Reconstruction. *IEEE Region 10 Conference*. [[paper](#)] [[code](#)]

## OPEN SOURCE

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### Weco AI: aideml (1k+ stars)

- Contributing to internal R&D at Weco AI exploring agentic tree search algorithms, LLM agent system design and core backend development. Improvements are rolled out periodically to the package by our team. [[package](#)]

### HuggingFace: Text Generation Inference (10.5k+ stars)

- Fixed bug in 4 bit quantization in HuggingFace's LLM inference engine related to MLP block [[commit](#)]

### TSFresh (9k+ stars)

- Implemented fine-grained control over multiprocessing of parallelized functions enabling developers to configure number of processes/jobs in model training and feature extraction [[commit](#)]

## PROJECTS

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GoLLUM - A Compiler between C++ and Go [[code](#)], PyNN (Deep Learning Framework) [[code](#)], GAN Experimentation Packages [[code](#)], Neural style transfer CLI tool [[code](#)], RTConcierge; Road trip recommendations via LLMs, Speech Transcription & Machine Translation [[code](#)]

## AWARDS

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### Myelin Intern Award

- Awarded to highest performing intern at the company

### Prof. M R Doreswamy Merit Scholarship Award (x2)

- Awarded to top performing students in the Department
- Awarded in Semesters 5 and 6 (2019-2020)

### Prof. C N R Rao Merit Scholarship (x2)

- Awarded to top performing students in the Department
- Awarded in Semesters 3 and 4 (2018-2019)

### Distinction Award (x6)

- Awarded to students securing a grade of First Class Distinction
- Awarded in Semesters 1, 2, 3, 4, 5 and 6 (2017-2020)

## INTERESTS

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- Trekking through the Himalayas of India, Nepal and Bhutan