

# Dhruv Srikanth

[dhruvsrikanth5@gmail.com](mailto:dhruvsrikanth5@gmail.com) | 646-379-8590 | [GitHub](#) | [LinkedIn](#) | [Website](#)

Pittsburgh PA, 15213

## EDUCATION

### The University of Chicago

Grad. April 2023

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

Relevant Coursework: Algorithms, Deep Learning, Machine Learning, CUDA Computing, Times Series, Data Analytics

### Toyota Technological Institute Chicago

Grad. April 2023

Joint with UChicago Master of Science, Computer Science

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

### PES University

Grad. Jun 2021

Bachelor of Technology, Electronics & Communication Engineering, Dean's List (2017-2021), GPA: 3.9

Relevant Coursework: Computer Vision, GPU Design, Machine Learning, Image Processing, Video Processing, Signals Analysis

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

**Frameworks:** CUDA, PyTorch (& Lightning), TensorFlow, Hugging Face, Ray, Langchain, Kubernetes, MPI, OpenMP, ElasticSearch

**Libraries:** NumPy, Pandas, Open AI API, Hadoop, Scikit-learn, Matplotlib, Keras, OpenCV, React, Django, Docker, Node, Apache Spark

## OPEN SOURCE & PUBLICATIONS

### PyTorch Contributor

Pittsburgh, PA

Parallel Module Map (with GPU support) | [Commit](#)

Nov 2023

- Implemented Python-like map modular to functions and inputs for distributed parallel computing across variable number of GPUs
- Enabled developers to distribute training through model-based parallelism with fine-grained control templates

### TSFresh Contributor

Pittsburgh, PA

Multiprocessing Job Manager (with CPU thread support) | [Commit](#)

June 2023

- Implementing fine-grained control over multiprocessing of parallelized functions
- Delivered object classes that enabled developers to configure number of processes/jobs in model training and feature extraction

### BIFURC: Bifurcation Identification For Ultrasound-Based Robot Cannulation

Pittsburgh, PA

Cecilia Morales, Dhruv Srikanth, Keith Dufendach, Artur Dubrawski | Submitted ICRA

Aug 2023

- Developed AI models and graph-based algorithms for semantic segmentation and identification of vessel bifurcations, leveraging **ML for blood vessel surgery** in animal subjects
- Conducted experiments with autonomous robotic arm, proving that method generalizes from phantom-simulators to pig subjects

### Resource-Conscious High-Performance Models for 2D-to-3D Single View Reconstruction

Bangalore, India

Suraj Bidnur, Dhruv Srikanth, Sanjeev Gurugopinath | IEEE Region 10 Conference [[paper](#)] [[code](#)]

Dec 2021

- Architected 2 novel deep learning models for 2D-to-3D single view reconstruction
- Leveraged residual and dense layer connectivity, to **reduce computational overhead** by 20%, **improving state of the art** by 25%+

## WORK EXPERIENCE

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

Pittsburgh, PA

Machine Learning Research Engineer | Dr. Artur Dubrawski

May 2023 – Present

- Trained and fine-tuned **large vision and language models** over distributed clusters (transformers, VAEs, autoencoders, bayes nets)
- Trained **multimodal foundation models** 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, IL

Machine Learning Researcher | Dr. Sendhil Mullainathan

Apr 2022 – Mar 2023

- Trained 52 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, expert system and API that utilizes user context to modify dynamic knowledge graphs

### Myelin Foundry

Bangalore, India

Machine Learning Engineer (Intern) | Generative AI, Language Modeling, Continual Learning

Jan 2021 – July 2021

- Created and led revenue stream of \$1m+ USD** with real-time competitor analysis tool with LLM & Generative AI framework
- Developed and deployed full stack web applications with Python, MySQL, HTML, CSS, JavaScript, Flask and Azure VMs

### General Electric

Bangalore, India

Machine Learning Engineer (Intern) | Aerospace + Healthcare ML

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 (QA pipeline)

## PROJECTS

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