Dhruv Vashisht

New York City Metropolitan Area | dhruvv301292@gmail.com | (781) 885-6072 | LinkedIn | GitHub

EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Computer Engineering — May 2021
GPA: 3.9/4

IIIT Bangalore — Bangalore, India
PG Diploma in Machine Learning — May 2019
GPA: 3.8/4

Vellore Institute of Technology — Vellore, India
Bachelor of Technology in Electrical and Electronics Engineering — May 2016
GPA: 9.15/10

PROFESSIONAL EXPERIENCE

C3 AI, New York, NY — **July 2021 - Present**
Solutions Engineer

- Project lead working directly with customers to build and deploy AI applications for the manufacturing and energy industries.
- Led a team of 8 developers to build ML powered dashboards for Petro-Sim – an application that simulates hydrocarbon processes.
- Developed a monitoring library to detect data ingestion anomalies, reducing debugging effort from hours to a few minutes.
- Reduced technical debt through unit testing with ~75% code coverage, and more than a 100 peer code reviews.
- Developed timeseries-based metrics from ML model inferences to enable engineers make 12x faster calibration decisions.
- Used React, Redux and rxjs to develop dynamic, data-driven user interfaces to display timeseries-based analytics and metrics.
- Designed data models, database schemas, & ETL pipelines for daily ingestion and processing from sources like AWS & external APIs
- Onboarded 5 developers on the project, conducting daily office hours to train them on the C3 framework.
- Wrote map-reduce jobs that ran daily and autonomously to pre-process incoming data before it was fed to the ML model.

Visual Design and Engineering Lab, Carnegie Mellon University — **May 2020 - December 2020**
Research Assistant

- Led the VLSI placement project, developing a Deep Reinforcement Learning based approach for solving the NP-hard PCB placement problem for Cadence and DARPA's Intelligent Design of Electronic Assets initiative.

Deloitte, Hyderabad — **August 2016 - October 2019**
Software Engineer

- Led client engagements to design, develop and test production level code for 3 insurance products using C#/.NET framework.
- Devised a large-scale mapping tool for SmartClaims module based on Adaboost and Decision Trees, dramatically bringing down developer effort from 10 hours to 15 minutes for previously seen code-fixes.
- Promoted to Consultant and received 9 performance awards.

PROJECTS

Segmentation-assisted Trajectory Prediction — **February 2021 – May 2021**

- Implemented a trajectory prediction architecture that ingests information pertaining to the past trajectory, social interactions and environmental interactions of a person and predicts their coordinates for the next 12 times steps.

Fault tolerant E-book distributed library — **August 2020 – October 2020**

- Designed and Implemented a Flask based fault-tolerant distributed asynchronous system, with heartbeats, distributed consensus, total ordering, checkpointing, and logging to provide strong consistency for a replicated (hot-swap and primary-backup) application.

End-to-end Speech Recognition Model — **November 2020 – December 2020**

- Implemented an Attention-based Speech-to-Text Deep Encoder-Decoder Neural Network using pyramidal Bi-LSTMs that was able to produce text with a mean Levenshtein Distance of 18

Mytorch – An Object-Oriented Deep Learning Library — **August 2020 – November 2020**

- Devised an object-oriented auto-differentiator API emulating PyTorch's Autograd that computes complex function derivatives by encoding them as directed graphs. Used this API to implement configurable MLPs, CNNs, LSTMs and GRUs

SKILLS

Programming Languages: Python, JavaScript, TypeScript, Java
Frameworks: PyTorch, TensorFlow, Django, Scikit-learn, Node.js
Libraries: React, Redux, RxJS
Data Tools: Spark, Databricks, Cassandra, PostgreSQL, Kibana ElasticSearch, MongoDB
Web Dev Tools: Splunk, Flask, Postman, Express