

Ajinkya Prabhu

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EDUCATION

Carnegie Mellon University

Masters in Mobile and IoT Engineering

- Intro to Computer Systems - 15513

Pittsburgh - Pennsylvania

May 2022 – Dec 2023

Vellore Institute of Technology

Bachelors in Electronics and Communication Engineering

- GPA - 9.1/10.0
- specialization in IoT and Sensors

Vellore - Tamil Nadu

July 2016 – June 2020

WORK EXPERIENCE

BlackRock

Software Engineer I

Gurugram, India

Jan 2020 – July 2022

- Collaborated with a team of five software engineers to develop a data lake called RBOR (Regulatory Book of Records) with schema management and automatic ingestion on the Cloudera Data Platform
- Increased adoption of RBOR platform across BlackRock
- Spearheaded ingestion of securities data; ingested **600GB/week with 293 columns (100M rows)**
- Boosted query performance by **60 times**

Mantra Labs

Software Engineering Intern

Bangalore, India

Jan 2020 – July 2022

- Analyzed I2S protocol in its application to a solid-state microphone on the BeagleBone Black
- Devised a facial recognition system to recognize unknown faces in security cameras using FaceNet algorithm

RESEARCH EXPERIENCE

ITC

Student Researcher

Vellore Institute of Technology - Vellore

May 2019 – July 2019

- Collaborated with a team of 5 students to develop a prototype that detects defects in incense sticks
- Developed a Convolutional Neural Network in tandem with an image processing pipeline for object detection and classification
- Achieved an accuracy of **82%** while maintaining throughput of **five sticks per second**

Creation Labs - Team AutoZ

Student Researcher

Vellore Institute of Technology - Vellore

Sept 2018 – Nov 2019

- Collaborated with a team of 10 students to develop an autonomous mobile robot to compete in IGVC competition
- Led development of sensor localization and electrical driver subsystem
- Successfully secured funding from DRDO for defense research during tenure as vice-captain

PROJECTS

Dynamic Memory Allocator | [GitHub](#)

- Developed a malloc package implementation that achieved a peak performance of **74%** utilization while maintaining a throughput of **~ 9000Kops**

Tiny Shell | [GitHub](#)

- Implemented a shell application using UNIX fork and signal handling

HTTP Proxy | [GitHub](#)

- Designed a concurrent web proxy with thread-safe caching between concurrent requests

Contributor - Vega | [GitHub](#)

- Developed distributed set subtract operation in Rust

SKILLS

Programming Languages: C, C++, Java, Python, MATLAB, SQL, VHDL, Rust, Scala

Technologies: Git, Arduino, ROS, LaTeX, Spark, TensorFlow, PyTorch, Hadoop, Linux

Languages: English (Professional), Hindi (Native), Marathi

PUBLICATIONS & PATENTS

Publication: Image Compression and Reconstruction Using Encoder-Decoder Convolutional Neural Network - Prabhu A., Chowdhary S., Narayanan S.J., Perumal B.

Patent: A scanning device for inspecting and sorting high aspect ratio objects and method thereof - N202041047428

AWARDS & ACHIEVEMENTS

Merit Scholarship: Awarded merit Scholarship for exceptional academic performance for 2 consecutive years