# **Anubhay Dinesh Patel**

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### **EDUCATION**

### Indian Institute of Information Technology, Kalyani - West Bengal, India

Bachelors in Technology (B. Tech.) - Computer Science and Engineering

Graduation Date: May 2021

Cumulative GPA: 9.68 | Department Rank 1

# **WORK EXPERIENCE**

# Tower Research Capital - Software Engineer I

C/C++, Python, Behave, BDD, TDD

• Working on the Trading System Test Platform team.

### **Gojek Tech** - Software Engineering Intern (GoAds)

Elixir, Phoenix Web Framework, Open API

- Worked with a senior engineer to deliver a new ad inventory type catered towards FMCG brands, providing them the option to run banners on the GoFood homepage. Following the delivery, 5000+ global and local brands on-boarded on it.
- Used internal tools & infrastructure to automate the invoice delivery for merchants.
- Utilized Open API spec to document the Ads System API, automating the generation of API clients (SDKs), stubs, and mocks for it in 50+ languages.
- Built the instrumentation pipeline for recording the metrics around the events (views/clicks) received by campaigns past their limit. I created a Grafana dashboard for the same.

### **Google Summer of Code** - Student Developer (PSF)

Python, Tox, Scrapy, Travis Cl

- Implemented an interface for robots.txt parsers in Scrapy (a web-scraping framework), allowing its 270k+ users to substitute a more spec compliant parser than the default one.
- Developed a pure-Python robots.txt parser compatible with Google's newly proposed revision of robots.txt specification. Over 2.6k+ Github projects depend on it.

# Indian Institute of Science - Research Intern at Robotics Innovations Lab

OpenCV, Keras, Deep Learning, Computer Vision.

- Utilized ResNet-50 based CNN along with data augmentation and transfer learning to classify items for an automatic warehouse inventory management system.
- Wrote a research paper and published it at ICCAS 2020.

# **Bomway** - Full Stack Developer Intern

Flask, MongoDB, Bootstrap, Python, JavaScript, HTML, CSS

- Implemented a shopping cart with support for multiple payment gateways, discounts, international shipping cost calculation, and an elegant user interface, which resulted in savings of \$3000 every year by replacing a third-party cart plugin previously used.
- Implemented a service to lazily resize images on user request with Amazon S3 as the storage backend

#### **PROJECTS**

### CodeChef Practice Tool - Link | Live Demo

PHP, React, MySQL, Relational Database Design, Web Scraping

- Built a web app to help competitive programmers search problems on CodeChef using problem tags. Deployed the app online with the help of Azure and Heroku.
- Scraped the CodeChef website, downloaded problems and tags, stored it in a MySQL database to overcome the lack of a public API.

#### Full-Text Search and Indexing Server - Link

Golang, Mux

- Created a service to search for words, inside a large quantity of text spread across multiple documents using an inverted index.
- Utilized it to create a service for searching inside a large number of research papers on my college's local network.

### **URL Shortening Service - Link**

Python, Redis, Postgresql, SQLAlchemy, Flask, Docker

- Created a URL shortening microservice built on top of Redis and Flask, utilized Postgresql as a persistent store to mitigate data loss due to failures.
- Utilized docker to containerize the service and allow for easy deployment.

### **Linux's Ping Command Clone - Link**

C++, Linux System Calls, Computer Networks

• Created a Linux ping command clone supporting both IPv4 and IPv6 protocols with the goal to enhance my understanding of ICMP protocol and Linux kernel internals.

### Virtual Reality Playground - Link

A-frame, Google Cardboard, JavaScript, HTML, CSS

Created a virtual reality-based visual programming language (similar to <u>Scratch</u>) for creating 3D stories, animations, and games, with the primary objective to help children in learning the fundamentals of computer programming.

# **ACHIEVEMENTS**

- Ranked 122, 256, 291 in Google Kickstart rounds globally.
- Candidate Master on Codeforces and 5 stars rated user on Codechef.
- Ranked 96th among 350 teams at ICPC Asia Amritapuri Site 2019.
- Among the top 50 students nationwide in IIIT Hyderbad's Lateral Entry Entrance Examination.

# **SKILLS**

Python, C/C++, Go, SQL, MongoDB, Linux, Flask, Django, OpenCV, Git, Assembly, LATEX, Bash.

### **PUBLICATIONS**

 Vision-based Object Classification using Deep Learning for Inventory Tracking in Automated <u>Warehouse Environment</u> - 2020 20th International Conference on Control, Automation and Systems (ICCAS) I Best Student Paper Finalist