

SOHAM PAREKH

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EDUCATION

University of Mumbai

B.E. Computer Engineering

Aug 2017 - May 2021
Overall GPA: **9.83/10**
Applied Mathematics, Discrete Mathematics, Algorithms, Databases, Machine Learning, Artificial Intelligence, Natural Language Processing, Cloud Computing, Distributed Computing ppor

EXPERIENCE

Univeristy of Massachusetts, Amherst

Research Intern (Guide: [Prof. Hui Guan](#))

Remote
Sep 2021 - Present

- Investigated importance sampling algorithms for training large graph convolutional networks

MIDAS, IIT Delhi

Research Intern (Guide: [Dr. Rajiv Ratn Shah](#))

Remote
Sep 2021 - Present

- Performed a work study analysis on emotion and time aware classification of tweets to assist moderation for suicide prevention
- Proposed a novel saliency-aware interpolation regularization method, PISA, functioning in hyperbolic space
- PISA beat existing methods on 7 benchmark state-of-the-art datasets

Alan AI

Software Engineer (Machine Learning)

Remote
July 2021 - Present

- Built a synthetic dataset sampler to train Alan's entity-recogniser, improving accuracy by 4.6%
- Added multilingual support for Alan's entity-recogniser
- Dockerized existing scripts for running model training on cloud

NMIMS University

Research Intern (Guide: [Prof. Kamal Mistry](#))

Remote
Sep 2020 - Sep 2021

- Developed a novel Friend Recommendation System based on Big5 traits, skill-matching & large scale hybrid filtering
- Utilized contextual information using tone & sentiment analysis of user responses
- Achieved personality match accuracy of 78% for top 5 recommendations

Github Open Source

Major League Hacking Fellow (Mentor: [Jordan Harband](#))

Remote
May 2021 - Aug 2021

- Remodelled existing code on NVM to rollout support for Windows-based systems
- Refactored npm-lockfiles to integrate support for Arborist
- Implemented a CLI tool using Go to monitor Github pull requests for checks using polling and notify user when ready to merge

Meta Open Source

Major League Hacking Fellow (Mentor: [Rik Cabanier](#), [Ricardo Cabello](#))

Remote
Feb 2021 - April 2021

- Created WebVR samples that interface with WebXR MediaLayers to achieve fluid resizing & motion in 3D space
- Extended Three.js adding support for controller & hand interactions
- **Impact** Illustrated improved performance, legibility with 57% more battery-life & 17% reduced latency

Betterbanking.app

Software Engineer Intern

Remote
Sep 2020 - April 2021

- Worked on Node.js and Apollo GraphQL to develop a performant GraphQL backend server
- Integrated a robust queue system using BullMQ for processing heavy background jobs
- **Impact** Improved server query response time by 72% by restructuring API and optimizing database queries

Wikimedia Foundation

Google Summer of Code Student Developer (Mentor: [Željko Filipin](#))

Remote
May 2020 - Sep 2020

- Created a Jest-preset to bootstrap test environment for Mediawiki tests
- Added test video recording with Jest using FFmpeg & Xvfb server
- Upgraded wdio-video-reporter npm package to add support for WebdriverIO v7

Falconry Software Pvt. Ltd.

Software Engineer Intern

Mumbai, IN
Dec 2019 - March 2020

- Refactored their CI/CD automation bot & made it configurable to multiple Github repositories
- Trained a probabilistic model on Falconry's own historical logs to predict network outages & cause of outages
- **Impact** Implemented logic to efficiently parse historical logs saving 38% computation time

PROJECTS

Hydrabot

[View Code](#)

- Programmed a configurable bot for Gitops workflows using Node.js, Github GraphQL API & AWS
- Integrated issue auto-labelling using unsupervised Graph-based Topic Labelling
- **Impact** Conserved 41% time & effort maintaining typical Gitops workflows

ApplyByAI

[View Code](#)

- Proposed a novel Recruitment System based on Big5 traits, skill-matching and large-scale hybrid filtering
- Utilized contextual information using tone & sentiment analysis of user responses
- Engineered low-cost solutions for PWD including speech to code software, integration with smart home devices, gaze tracking for navigation
- **Impact** Saved 22.3% time during college committee interviews

RESEARCH & PUBLICATIONS

1. **S. Parekh**, V. Mody, V. Mody, P. Bhuse, and V. Sawant. *ApplyByAI: Personality-based, skill-aware Candidate Recommender System*. Submitted
2. R. Sawhney, M. Thakkar, V. Shah, **S. Parekh**, and D. Mukherjee. *PISA: Poincaré Saliency-Aware Interpolative Augmentation*. Submitted
3. V. Mody, V. Mody, **S. Parekh**, and K. Mistry. *Friendly: A pilot study for personality-based friend recommendation system*. In: 2022 7th International Conference for Convergence in Technology (I2CT). in press
4. D. V. Savla, **S. Parekh**, A. R. Gupta, D. Agarwal, and N. M. Shekokar. *ResQ - Smart Safety Band Automated heart rate and fall monitoring system*. In: 2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC). 2020, pp. 588–593
5. V. Mody, V. Mody, and **S. Parekh**. *Distress – An Application for Emergency Response and Disaster Management*. In: 2020 International Conference on Smart Electronics and Communication (ICOSEC). 2020, pp. 830–836
6. V. Mody, V. Mody, and **S. Parekh**. *A study on Cloud enabled Applications and their Security Issues*. In: 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT). 2020, pp. 1–8

LEADERSHIP & TEACHING EXPERIENCE

- **Google Summer of Code & Outreachy Mentor** Mentored students to implement features in Javascript, Jest, Web & Middleware tech at *Wikimedia Foundation*
- **Founder Codesis** Found *Codesis*, an organization to promote pragmatic, community driven learning with open-source among college freshers and sophomores.
- **Head Instructor** Instructed 100+ students of multiple batches to reinforce learning concepts at *DJ Unicode*
- **Placement Coordinator** for the Computer Science Department at *D.J. Sanghvi College of Engineering*

TALKS

- Presented "[Purely Functional](#)", a lightening talk on Functional Programming in Javascript
- Presented "[Leave the REST to gRPC](#)", a lightening talk on gRPC
- Talk on Diversity and Inclusivity in Open Source at The Linux Foundation Open Source Summit
- Talk on [Open Source 101](#) at Google Developer Student Club DJSCE
- Talk on [Learning the Open Source Way](#) at Developers Club JGEC
- Keynote talk on [Opportunities in Open Source](#) at Bug Busters
- Devstasion showcase talk at Open Source India Conference

SKILLS

Programming Languages	C, C++, Javascript, Python, Go, Rust, Java
Libraries/Frameworks	Node, React, Django, FastAPI, PyTorch, Tensorflow, Cypress, Jest, gRPC, GraphQL, Keras, Scikit-learn, NumPy, Pandas, OpenCV, Gensim, SpaCy, NLTK, Flask, Streamlit
Tools	Docker, Kubernetes, Elasticsearch, Build Tools, Monitoring, CI/CD
Databases	SQL, MongoDB, Redis, FaunaDB, Cloud Databases

AWARDS

- **Conferred** Meritorious Student Award for outstanding performance inside and outside academia
- **Nominated** for *Google Open Source Peer Review Bonus* for extensive contributions to open source
- **Winner** of *HackBMU 2021* out of 122 teams
- **Winner** of *Codebreak 2.0 2021* out of 105 teams
- **Winner** *Hackerearth's Recruit-a-thon 2021* out of 2428 teams
- **Winner** of *JP Morgan Chase Code for Good 2020* out of 80 teams