SARANSH CHOPRA

 saranshchopra7 | saransh0701@gmail.com | Saransh Chopra | Saransh-cpp | WhiteViolin

EDUCATION

Cluster Innovation Centre, University of Delhi   New Delhi, India
B.Tech. Information Technology and Mathematical Innovations | Computational Biology | CGPA: - 9.31   *2020 – 2024*

EXPERIENCE

Google Summer of Code   Remote
Open-Source Developer at PyBaMM, NumFOCUS   *May 2021 – present*
- Built an automated Twitter Bot capable of tweeting random Battery Degradation Simulations (random parameter sets, models, experiments, degradation modes, parameter values, etc.) and replying to requested simulations with the appropriate GIFs, from scratch.
- Followed a micro-services based architecture to keep two major functionalities separate.
- Built a CI/CD pipeline using GitHub Actions and Heroku, and automated everything in the repository.

MoneySeeds   Remote
2D Animator   *August 2020 – September 2020*
- Developed animated content using a Python based, Open-Source Mathematical Engine library called Manim.
- Used MikTex for writing LaTeX in the videos and FFmpeg for video processing .

PROJECTS

PopItUp [Android, Kotlin, Firebase, Firestore, Google Sceneform SDK, Google ARCore SDK]   *May – August 2021*
- An Augmented Reality game developed in native android with Firebase and Firestore as the backend and database.
- Externally injected Sceneform SDK into the app and used FirestoreRecyclerView to load live data into the leaderboard.

MemeTastic: Winner of Elastic Hackathon [Flutter, NodeJS, Elasticsearch, Kibana, CI/CD, Google Cloud]   *May 2021*
- A full stack Flutter application with a backend in NodeJS that runs every 30 minutes on a CI/CD pipeline developed using GitHub Actions to ingest latest meme data into Google Cloud hosted Elasticsearch.
- The Flutter frontend then pulls this data providing a feature to search any meme using the ngram analyser.

ChaoticEncryption [Python, ODEs, Encryption-Decryption, Pseudo-Random Number Generator, Matplotlib]   *March 2021*
- An Encryption-Decryption script that uses Logistic map and Lorenz System of Differential Equations as PRNGs.
- Along with encrypting images, it also aims to connect chaos, encryption and fractals together.

DocLense [Dart, Flutter, HiveDB]   *February - March 2021*
- A document scanner application, capable of cropping, editing and compiling images into a PDF.
- The app uses a local storage database, HiveDB, to store all the created PDFs and is available on Google Play Store here.

RELEVANT SKILLS

Languages:	Python	C/C++	Javascript	Java	Dart	Kotlin
Frameworks:	Flutter	ReactJS	ExpressJS	NodeJS	React-Native
Platforms:	Linux	Web	Windows	Heroku	Google Cloud
Tools:	Git	Elasticsearch	Kibana	Firestore	MongoDB	Firebase	Docker	CI/CD
Other Skills:	Content Writing	Public Speaking	Communication	Team-Work

OPEN SOURCE EXPERIENCE

PyBaMM:	Fixed various bugs, added an example notebook on parameterization, updated the existing documentation and made the library more user friendly by adding warnings, for releases 0.4.0. and above.
Color-Science:	Implemented the conversion between HCL and RGB colourspaces.
Open-Source Contributor:	Mexili Winter of Code (2nd / 250+)	Girlscript Summer of Code (98th / 6000+)	Cross Winter of Code (2nd / 250+)

AWARDS AND ACHIEVEMENTS

Hackathons:	Winner of the Elastic X Code for Cause hackathon (out of 2500+ registrations).
Asteroid Discovery:	Discovered an asteroid having a fixed orbit around Sun by analysing the data of Pan-STARRS
Talks:	Organised and delivered talks on Python in research and, Git and GitHub for the students of IIT Madras' online degree.