

Nikhil Chavanke

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Education

Indian Institute of Technology, Bombay

Mumbai, INDIA

BACHELOR OF TECHNOLOGY

July 2017 - 2021

- Majoring in **Computer Science and Engineering** with **Honors**
- JEE-Advanced: **298**/220,000 , JEE-Mains: **2496**/1.2 Million
- 10th in State, Regional Maths Olympiad and Qualified for **INMO**
- **KVPY** Awarded with the prestigious KVPY(Kishore Vaigyanik Protsahan Yojna) Fellowship Award

Work Experience

Palet [[palet.design](#)]

Bangalore, INDIA

FOUNDER | FULLSTACK DEVELOPER

Jun 2023 - Dec 2023

- Built a **website builder** having code/design editor from scratch with all state of the art functionalities like **canvas editing**, **hot reload**, document autosave, **preview** for multipage site in **sveltekit**
- Leveraged openAI's gpt3.5 model to provide an AI that can produce **context specific website templates** as well as edit them to **implement functional code features**
- Implemented a whole **component library** from scratch including editor, treeview, timeline, colorinput for the editor
- **Automated** the **deployment** to vercel and database migration to supabase with github actions
- Came up with a process to keep **design and development in sync** and also allow AI to work in cohesion to leverage power of each of them
- **Provided way to deploy** websites to netlify(using Netlify API), also get non-boilerplatey code from the designs
- Developed an UI for GSAP animation library capable of most complex webpage animations with timeline previews

Flek AI

Bangalore, INDIA

FOUNDING ENGINEER

Dec 2022 - April 2023

- Developed a suite of **designer-developer tools** addressing the problem of sync, documentation and consistency
- Integrated opensource vs code editor for **online development** of apps and provided **automated deployment** and **subdomain hosting** for user websites using dockerized containers
- Created a **Figma plugin** with oauth login from electron app to enable to create and maintain design systems accross accounts and files, generate component variants, get code styled in tailwind, less, sass, css, styled components
- Developed a web application for **design system documentation** similar to notion, allowing users to insert custom cards for each design tokens
- Implemented a Figma to web(react) and mobile(react native) application to generate component abstracted **code-base directly from designs**
- Wrote a npm library to enable frontend developers to **pull/sync design tokens in codebase** directly from figma
- Used **portainer** for container handling, **traefik** as reverse proxy, **aws** for deployments

Jio Platforms

Mumbai, INDIA

SOFTWARE DEVELOPER, TEAM: JIO SUBSCRIPTION ENGINE

July 2021 - Nov 2022

- Worked on **Jio Subscription Engine** (JioSE) an **in-house** developed subscription platform being developed for managing subscriptions of different services with respect to Jio Customers.
- Developed APIs, delivered various features including **notifying users for netflix subscriptions** purchase, **suspend resume** feature and on Car connect, Jio Cloud, JioTV product subscriptions.
- Wrote **extensive test cases** using jest, mocha and chai frameworks, worked on **caching and queuing frameworks** like redis and rabbitmq, **led major table refactoring** in the codebase
- Performed **data migration** for millions of users in oracle database between environments using DDL.
- **Executed replica and prod deployments** in docker/k8s and resolving deployment issues as well as **UAT** defects.
- **Published a [patent]** on System and method for referencing media using content-based timestamps
- Took JioSE from **staging(when I joined) to live in production** handling 450M users, provisioning over 36 third-party postpaid and prepaid bundled subscriptions including Netflix, Amazon, hotstar.

Honeywell

Hyderabad, INDIA

SOFTWARE ENGINEER INTERN, TEAM: UAV-UAM TRACKING

May 2020 - July 2020

- Implemented a **Natural language** based search engine for the context of **UAV-UAM tracking** and internet services.
- The engine handles natural language queries and supports filtering results by **keywords, mathematical queries** on the flightplans, positions and subscriptions.
- This was achieved using the **RASA** framework for Natural language Understanding and then **Elasticsearch** for the searching and aggregations as well as **Auto-suggestion**.

Skills

Languages	JavaScript, TypeScript, C++/C, Python, MATLAB, Bash, Racket, $\text{\LaTeX}$
Machine Learning	Tensorflow, PyTorch, OpenAI, OpenCV, Keras, SpaCy
Development	NodeJS, NestJS, Svelte(kit), Django, Flutter, Vue, React, HTML, CSS
DevOps	Git, AWS, Docker, Kubernetes, Azure, Vercel, Netlify
Databases	Oracle, MongoDB, SQLite, Cloud Firestore, Elasticsearch, Postgresql, Redis
Miscellaneous	Rabbitmq, Supabase, Google analytics, DBeaver, Postman

Research Experience

Stain Normalization of Histopathological Images [arXiv]

Mumbai, INDIA

RESEARCH INTERN, GUIDE: HARSHAL NISHAR

May 2019 - July 2019

- This paper was Accepted in **MICCAI'20**, co-authored with the guide Harshal Nishar.
- Researched on unsolved problem image stain normalization using different approaches in **PyTorch**.
- These included tweaked classical image processing approaches(**histogram equalization**, clustered colour transfer using **Reinhard**) as well as sota **deep learning** approaches(**Fast neural style transfer**, **Unpaired CycleGAN**.)
- Approaches were tested using images from five different labs and **Fast Neural style Transfer** with **Adversarial Loss** gave visually best and **indistinguishable** results this approach was used in the paper.

Video Redaction

IIT Bombay, INDIA

RND PROJECT, GUIDE: PROF. SHARAT CHANDRAN

Aug 2020 - Dec 2020

- Worked on the problem of **Video Redaction** on videos with **occlusion** and low quality(taken with mobile camera) by building a solution on top of **DSFD** model.
- On top of that we performed Redaction with **preserving Information**(facial landmarks), so that the videos can be used for training of other Vision algorithms as datasets without GDPR Violation.

Other Key Projects

Secure Personal Cloud [github]

Oct 2018 - Nov 2018

- Implemented a cloud based file system, with **Synchronization** and Block level file **Encryption-Decryption** Systems using **Django** and its **REST API Framework**.
- **Linux client** has facility to upload, download, list and synchronize files and Mobile friendly **Web Client** to view video/audio/pdfs and download files from the server for which a website was designed.
- **Multi-client Setup** for Synchronization(client to server and vice versa) and **complete control** over encryption schema

Compiler for a C-like language

Oct 2019 - Nov 2019

- Implemented **scanner**(token detection), **parser**(AST), semantic analyser, **TAC**, register transfer language and finally, assembly language to support arithmetic expressions, control flow statements and function calls

Splitpay [github]

Oct 2021 - Nov 2021

- Developing a mobile application to seamlessly integrate splitting, tracking, settling and doing payments through any UPI app, along with expense statistics in **Flutter** framework with **firebase**.