

# Swastik Patil

## Software Engineer · Frontend & Product Engineering

swastik592@gmail.com | [swastikpatil.com](https://swastikpatil.com) | Navi Mumbai, India | [linkedin.com/in/swastikpatil](https://linkedin.com/in/swastikpatil) | [github.com/Swastik-Patil](https://github.com/Swastik-Patil)

### SUMMARY

Software Engineer specializing in frontend architecture and product engineering. Founding frontend engineer who built a research platform from the ground up — a collaborative LaTeX editor, a citation-graph PDF reader, and academic tooling used end-to-end by researchers. Product-minded, security-conscious, and a published researcher in deep learning and edtech.

### EXPERIENCE

#### Software Engineer · Research Commons

Jul 2026 – Present

- Own and evolve the research platform's product experience across web.
- Ship agentic-AI features and product improvements informed by real researcher workflows.

#### System Engineer · Tata Consultancy Services

Nov 2025 – Jun 2026

Thane, India

- Built and maintained frontend interfaces using the ASP.NET MVC architecture for a large-scale enterprise platform.
- Delivered production features within an established enterprise delivery team.

#### Founding Frontend Engineer · Research Commons

Nov 2024 – Nov 2025

Bengaluru, India

- Architected the full frontend from scratch with optimized DOM / virtual-DOM manipulation for performance.
- Built a collaborative LaTeX editor (Monaco + Yjs) with real-time multi-user editing.
- Integrated a Tiptap rich-text editor for academic content blocks and citation styles (APA, MLA, IEEE, Harvard, Chicago).
- Developed a custom PDF reader with annotations, highlights, and citation-graph visualizations, plus an analyzer table for comparing papers side by side.
- Routed all API calls through Vercel server-side functions with XSS/CSRF protection and secure cookies; set up environment-based CI/CD for staging and production.

#### Full-stack Developer · Reva Technologies

Aug 2024 – Nov 2024

Panvel, India

- Built a full-stack research-paper publishing platform in Next.js — submission, peer review, and publication.
- Designed backend database schemas and APIs for reliable frontend-backend communication.

#### Technical Head · Google Developer Student Club, PHCET

Jul 2023 – Jul 2024

- Ran Google Cloud and Gen AI Study Jams; mentored peers on technical projects and problem-solving.

#### Python Developer · upSkill Campus

Jun 2023 – Jul 2023

Mumbai, India

### PUBLICATIONS

#### Enhancing Public Safety: Real-Time Weapon Detection through Deep Learning using YOLOv9

IEEE Xplore · [ieeexplore.ieee.org/document/10959791](https://ieeexplore.ieee.org/document/10959791)

#### Web-Based Teacher-Guardian Mentoring System for Enhanced Student Support and Data Management

Peer-reviewed publication

### SKILLS

#### Languages

TypeScript, JavaScript, Python, C++

#### Frontend

React, Next.js, ASP.NET MVC (Razor), HTML5, CSS3, Tailwind CSS, Framer Motion

#### Backend & Data

Node.js, FastAPI, Express, MongoDB, Firebase, REST APIs

#### Cloud & Tools

Google Cloud, Vercel, Git, Electron, CI/CD

#### Focus

Product Development, Product Management, Agentic AI, Real-time Collaboration, Rich-text & PDF Tooling

### EDUCATION

#### B.E., Computer Engineering · Pillai HOC College of Engineering & Technology

#### Diploma, Computer Technology · Maharashtra State Board of Technical Education