

# Aryan Patil

217-904-0497 | [linkedin.com/in/patil-aryan](https://www.linkedin.com/in/patil-aryan) | [patilaryan.com](https://patilaryan.com) | [patil11@illinois.edu](mailto:patil11@illinois.edu)

## EDUCATION

### University of Illinois Urbana Champaign

Master of Science in Information Management, **GPA - 3.9/4**

Champaign, IL

Aug 2023 – May 2025

### University of Mumbai

Bachelor of Engineering in Mechanical Engineering, **GPA - 3.78/4**

Mumbai, India

Aug 2019 – May 2023

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Python, SQL, C

**Frontend:** Next.js, React, Tailwind CSS, Framer Motion

**Backend:** Node.js, Express, RESTful APIs, tRPC, PostgreSQL, MySQL, MongoDB, Prisma, Supabase

**Cloud & Dev Tools:** AWS, GCP, Git, GitHub, Tableau, Docker

## EXPERIENCE

### Software Development Intern

Sept 2024 – Present

*Education Justice Project*

Champaign, IL

- Led the development of a full-stack digital archive website, using **Next.js, React, TypeScript, Tailwind CSS, and PostgreSQL**, resulting in **3,000+** monthly visits and a **40% increase** in social media engagement.
- Achieved a **90% document retrieval** success rate by developing an **advanced search system** with PostgreSQL's full-text search and Prisma ORM, featuring keyword search and autocomplete for **1,000+ academic records**.
- Slashed **content management time by 35%** by engineering a Next.js admin panel with role-based authentication, secure uploads, organization, grouping, edits, updates, and deletions for the EJP archive

### Graduate Research Assistant

Jan 2024 – Aug 2024

*University of Illinois Urbana Champaign*

Champaign, IL

- Cleaned and preprocessed **20 GB+ of multi-modal** wearable sensor data ensuring data quality and consistency.
- Conducted hyperparameter tuning using Grid Search on models like SVM and Random Forest, leading to a **15% improvement** in model accuracy and a **40% reduction** in feature set size, making the model more efficient.

### Software Development Intern

Jul 2022 – Dec 2022

*Tata Consultancy Services*

Mumbai, India

- Built frontend components for an OCR application using **React**, enabling seamless image uploads (**handling an average of 100+ images/day**), initiation of text recognition, and real-time display of extracted text.
- Configured **RESTful API endpoints** using Node.js and Express.js, improving OCR engine integration and **reducing API response time by 25%**, resulting in faster processing for **1000+ weekly** user requests.
- Optimized MongoDB queries through indexing strategies, **increasing data retrieval efficiency by 30%**.

## PROJECTS

### AI powered Repository Analysis Tool | *Nextjs, TypeScript, tRPC, PostgreSQL*

Jan 2024 – May 2024

- Engineered and deployed an **AI-powered repository analysis tool** to address challenges in codebase navigation by implementing features like **commit summarization, code change analysis, and codebase chat** using AI.
- Developed a **RAG (Retrieval-Augmented Generation) pipeline** leveraging text embeddings and **Google Gemini API**, improving context-aware **code search efficiency by 30%** through semantic query understanding.
- Integrated AssemblyAI's voice-to-text API to achieve a transcription **accuracy rate of 95%**, automating the transcription and analysis of key insights from team discussions.

### Realtime Live Video Conferencing App | *Nextjs, TypeScript, WebRTC, Tailwind CSS*

Aug 2023 – Dec 2023

- Built a responsive, full-stack video conferencing platform achieving **consistent sub-200ms latency** for up to **50 concurrent users** by integrating WebRTC and GetStream API within a Next.js and TypeScript framework.
- Developed meeting control panel including **screen sharing, recording** and participant management features
- Implemented key meeting management features including **automated scheduling** for **30+ recurring meetings**, a comprehensive archive of past meetings, and streamlined access to recorded sessions.

### Fullstack Social Networking App - LinkedIn Clone | *React, MongoDB, Express, Nodejs*

Jan 2023 – May 2023

- Architected a scalable social networking application using React, Node.js, Express, and MongoDB, designed to handle **500+ concurrent users** while maintaining sub-second API response times.
- Constructed a **RESTful API** using Node.js and Express, integrating over **20+ endpoints** to manage **complex interactions** like user authentication, connections, posts, likes, comments and a fully **functional job board**.
- Designed a responsive front-end using **React and React Query**, integrating a secure authentication system via **JSON Web Tokens** to ensure robust user data protection and seamless user access.