Onkar Mendhapurkar

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WORK EXPERIENCE

Microsoft — *Technical Consultant Intern, Hyderabad, Telangana, India* June 2025 – August 2025
- Developed scalable frontend architecture with **Redux Toolkit**, reducing dev time **60%** and merge conflicts **70%**.
- Implemented secure **MSAL authentication** (Azure AD) with protected token handling and Redux integration, reducing auth-related bugs by **80%**.
- Delivered **full-stack components** and **API integrations** for 5+ modules (Consultant, GRM, LT), adding CRUD, analytics, and skill gap features while improving integration speed by **45%**.
- Established the project's **Jest testing framework** and component validation methodology, setting standards adopted by the entire frontend team.

Ab Normal Home — *Mobile Application Developer, Pune, Maharashtra, India* June 2024 – November 2024
- Built a cross-platform **React Native** app improving internal communication for 20+ staff.
- Developed secure **OTP login**, real-time chat, and a notice board for daily operations.

Interactive Learning — *Full Stack Developer Intern, Pune, Maharashtra, India* September 2024 – October 2024
- Launched a quiz-based learning platform with **auto-generated quizzes**, enabling **50+ teachers** to identify learning gaps.
- Optimized a responsive **React.js** UI with **95% accessibility compliance**, supporting **200+ daily users**.
- Contributed to **full-stack development**, ensuring seamless integration between frontend and data/logic layers.

PROJECTS

Hope: Multimodal AI Companion | *React, FastAPI, DeepFace, Wav2Vec2, RAG, Google ADK, Vertex AI* [⟠]
- Designed a multimodal emotion-recognition pipeline (**DeepFace**, **Wav2Vec2**, **RoBERTa**), achieving **85% accuracy** across facial, audio, and text signals.
- Engineered a **RAG-based personalization** layer using **gemini-2.5-flash**, **Google ADK**, and **Vertex AI Memory Bank** with a real-time **React** dashboard.
- Implemented secure architecture: **AES-256-GCM** vitals storage, **TLS WebSockets**, **PII redaction** (Presidio), plus **BLE telemetry** and **Twilio WhatsApp alerts**.

WealthWise: Pension Optimization Platform | *React, Django REST, FastAPI, XGBoost, Pinecone* [⟠]
- Created an AI-assisted retirement planner improving pension projection accuracy **35%** using ML risk modeling.
- Architected **RAG-based document intelligence** with **Pinecone**, boosting search and Q&A relevance **40%**.
- Designed a scalable **React–Django–FastAPI** microservice architecture, reducing overall API latency **30%**.

Scribly: YouTube Notes and Annotation Extension | *React, Tailwind, Chrome Extension APIs, Vanilla JS* [⟠]
- Built a **FOSSHack-winning** Chrome Extension enabling **timestamped notes** and annotations for **50+ users**.
- Created a **Smart Dashboard** and overlays with **React** and **Tailwind**, reducing research time **30%**.
- Integrated offline-ready **localStorage** state management for persistent notes, screenshots, and annotations.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML/CSS, Bash
Frontend: React, React Native, Next.js, SvelteKit, Streamlit, Java Swing, Tailwind, MUI, Redux, Figma
Backend: Express, Spring Boot, Flask, FastAPI, Django, REST APIs
Databases: MySQL, PostgreSQL, SQLite, MongoDB, Firebase Firestore
Tools: Linux, Git, GitHub Actions, Azure DevOps, Docker, Kubernetes, Jenkins, GCP, Azure, AWS, Firebase, Jest
Big Data: Hadoop, Spark, Mahout, Pig, Hive
Coursework: DSA, OOPS, DBMS, Operating Systems, Computer Networks, Agile, Big Data, Cyber Security, DevOps
AI/ML Technologies: Google ADK, Transformers, LangChain, OpenCV, BERT, RAG, Vertex AI, Tesseract OCR

EDUCATION

Symbiosis Institute of Technology, Pune 2022 – 2026
B.Tech in Computer Science and Engineering *CGPA: 8.62/10*

AWARDS, HONORS AND CERTIFICATIONS

- **Winner – FOSSHack 2025**: Developed Scribly – Open Source Chrome Extension.
- **Finalist – MUFG Gen-AI Hackathon, Bajaj Finserv HackRx 5.0**: AI-driven pension and healthcare solutions.
- **President – Rotonity (Robotics and Automation Club, SIT)**: Organized workshops, projects, and events.
- **Microsoft Certified: Azure Fundamentals, Azure AI Fundamentals** (AZ-900 certificate — AI-900 certificate)