

Keshav Bhagat

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EDUCATION

University of Michigan

Bachelor of Science in Computer Science, Minor in Business (GPA: 3.829/4.0)

May 2026

Ann Arbor, MI

- **Relevant Coursework:** Introduction to Operating Systems; Database Management Systems; Web Systems; Intro to Artificial Intelligence; Data Structures and Algorithms; Theory of Computation; Computer Organization

WORK EXPERIENCE

swype

June 2025 – Present

Co-Founder and Full-Stack Software Engineer

Ann Arbor, MI

- Designed and developed swype, an AI-powered microlearning application that delivers lessons, adaptive quizzes, and personalized learning analytics, with a “swype up” gesture to reveal bite-sized snippets of information
- Developed a dynamic content recommendation engine using a 4-tier importance \times 5-level familiarity matrix to personalize quiz difficulty and lesson sequencing based on user knowledge
- Built the backend using FastAPI, PostgreSQL, and Docker, with REST APIs for lessons, quizzes, and bite-sized content modules; deployed to a VPS with CI/CD automation and JWT/Firebase auth
- Engineered the iOS app in Flutter, implementing Google OAuth and scalable state management via Provider; currently rolling out to beta testers through TestFlight

Dream11

May 2024 – July 2024

Software Development Intern

Mumbai, India

- Built a comprehensive release management site using Remix, Prisma ORM and MySQL, enabling tracking and creation of Dream11 app releases with build history and release information; used by 800+ employees
- Developed APIs using Prisma and MySQL, leveraging async programming, database query optimisations, and generic schema designs to achieve sub-100ms latency for 800+ engineers within Dream11’s microservices ecosystem
- Designed and implemented the frontend with Remix and React, incorporating shadcn/ui, Tailwind CSS, and various custom hooks to create dynamic and user-friendly components, enhancing the user experience
- Executed 20+ tests via Callstack’s Reassure to verify functionality and performance of custom React Native components

Web Spiders

June 2023 – July 2023

Software Engineering Intern

Kolkata, India

- Built “EmpowerMeAI”, a job-seeking and career-advising chatbot tailored for job seekers, powered by the GPT-3.5 Turbo 16k model; ran a pilot with 75 users, resulting in an 18% reduction in time-to-apply
- Engineered the application in Python with an intuitive CLI interface, harnessing Glassdoor and Indeed APIs to dynamically fetch job listings based on users’ skills and expectations

PROJECTS

PromptTube | *React, Javascript, TypeScript, Manifest V3, Webpack*

May 2025 – Present

- Built PromptTube (Chrome Web Store Featured), a Chrome extension for Youtube with 600+ users and 4.7-star rating, enabling interactive video chat, instant summaries, multilingual Q&A, and clickable timestamps for precise navigation
- Architected the core sidebar UX as a resizable, theme-aware React component injected into YouTube’s DOM via content scripts and postMessage; leveraged localStorage to persist user-adjusted sizes, chat history, and settings across sessions
- Engineered a robust React/TypeScript MV3 transcript pipeline with retrying DOM queries, dual-format timestamp regex parsing, and an LRU chat-history cache; packaged with a multi-entry Webpack build

Network File Server | *C++*

April 2025

- Engineered a multi-threaded TCP file server in C++ exposing a hierarchical file system over a custom FS protocol
- Implemented fine-grained concurrency with Boost mutexes/shared-mutexes—per-inode reader/writer locks, hand-over-hand traversal, and deadlock-free deletion—to safely serve many simultaneous clients
- Designed on-disk inodes, directory entries, and block-allocation logic with crash-consistent write ordering, enabling reliable reads/writes and efficient block reclamation

DealDepot | *Node.js, Express, MongoDB, React, Redux, Stripe*

May 2024 – June 2024

- Developed a full-featured e-commerce platform with React frontend and Node.js/Express backend with MongoDB
- Implemented advanced product browsing features by building APIs with pagination and dynamic filters; added a secure Stripe-based payment system to enable seamless checkout

TECHNICAL SKILLS

Languages & Frameworks: C++, Python, Java, SQL, FastAPI, Express, JavaScript, Dart, Flutter, React, Next.js

DevOps & Infra: PostgreSQL, MySQL, NoSQL, MongoDB, Firebase, Docker, Git, AWS, Prisma, SQLAlchemy, CI/CD