Mihir Mangesh Pavuskar

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EDUCATION

University of Southern California **Los Angeles, CA**
Master of Science in Computer Science GPA: 3.95 | Dec. 2024
Relevant Coursework: Artificial Intelligence, Algorithm Analysis, Machine Learning, Natural Language Processing, Deep Learning

Vellore Institute of Technology **Vellore, India**
Bachelor of Technology in Computer Science and Engineering GPA: 3.82 | Aug. 2022
Relevant Coursework: Operating Systems, Computer Networks, Cybersecurity, Web Technologies, Databases, Distributed Systems

SKILLS

Frontend Development: ReactJS, NextJS, Redux, Tanstack, ChakraUI, MaterialUI, WebAssembly, TypeScript, JavaScript, CSS,
Backend Development: Node, Go, Ruby, Docker, AWS, REST API, gRPC, DynamoDB, XML, Kubernetes, MongoDB, SQL, Firebase
Machine Learning: Tensorflow, PyTorch, NLP, Computer Vision, TFJS, Algorithms, SciKit Learn, LangChain, MLOps, Python, C++

PROFESSIONAL EXPERIENCE

AI Software Developer Intern **Los Angeles, USA**
Tikr Media Aug. 2024 – present
- Lead scalable **microservices architecture** in **Go** using **gRPC framework** integrating **PostgreSQL, S3, and AWS Lambda,** reducing system latency by 40% while ensuring GDPR compliance across 100,000+ user records.
- Implement comprehensive testing framework with **unit, integration, and chaos testing**, achieving **95% test coverage**.
- Deploy end-to-end CI/CD pipeline using **Docker** and **AWS EKS** for microservices deployment

Software Developer, Frontend **Bengaluru, India**
MURF AI Sept. 2022 – Dec. 2022
- Developed critical features in video/audio editing studio using **React** and **TypeScript**, implementing **custom hooks** and **context** providers that improved code reusability by 35% and reduced bundle size by 40%.
- Engineered **performance optimizations** through **UI virtualization** and **Redux state management** patterns, resulting in 5x faster rendering for data-intensive media projects and 60% reduction in memory usage.
- Implemented **GA4 analytics** integration, achieving 100% data consistency while maintaining production stability.

Full Stack Software Developer Intern **Chennai, India**
Velozity Global Solutions Jan. 2022 – Apr. 2022
- Overhauled dashboard by migrating from **legacy code to NextJS** with **modular frontend components** achieving 30% **code reusability** and implementing **lazy loading** that reduced initial load time by 40%.
- Engineered real-time ECG monitoring system using **NextJS** with **custom ReactCanvas visualization library**, implementing **WebSocket** for **live data streaming** and reducing latency by 60% while handling 50+ concurrent patient sessions.

Student Research Intern **Bengaluru, India**
Samsung Dec. 2019 – May 2020
- Architected end-to-end data pipeline for **slang normalization**, with **custom preprocessing algorithms** for handling **non-standard words** and internet slang, achieving 98.75% classification accuracy across 17 test batches of 500,000 samples each

PROJECTS

Cloud Cafeteria Summer 2024
- Led development of full-stack restaurant management system utilizing **NextJS** and **GoLang**, leveraging **Tanstack Query** for state management and achieving 99.9% uptime through **AWS Fargate** and **CloudFront CDN deployment**.
- Designed scalable data architecture integrating **DynamoDB** for real-time operations and **Redshift** for analytics, reducing query latency by 60% while handling 10,000+ daily transactions.
- Utilized **Firebase** for authentications and session management to reduce server load on primary database.

Resume AI Summer 2023
- Implemented full-stack resume generation platform using **NextJS** and **Vercel-AI SDK**, implementing **server-side streaming** that reduced response latency by 60% while handling 1000+ concurrent user
- Built responsive resume editor and management dashboard using **ChakraUI** and **React Query**, achieving 98% accessibility score and reducing client-side rendering time by 40%.

Online Pente Playing AI Agent Spring 2023
- Implemented leveraging **alpha-beta pruning algorithm** running at depth 5 with **C++** capable of defeating Random, Minimax and Level 1 agent on pente.org.
- Improved performance by reducing search space and through optimizations like **Forward Pruning, Move Ordering,** etc.
- Devised memory efficient agent and compiled to **web assembly** to produce near-native performance on client-side and deployed as a user friendly **ReactJS app** using **Netlify**.

See Food Fall 2020
- Built a “Shazam for Food” React app capable of identifying and classifying up to 500 dishes from uploaded pictures.
- Utilized **TensorFlow ResNet** model **achieving 82.7%** accuracy and converted to **TensorflowJS** model for deployment.