

# Mihir Mangesh Pavuskar

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## EDUCATION

### University of Southern California

Master of Science in Computer Science

Los Angeles, CA

GPA: 3.95 | Dec. 2024

**Relevant Coursework:** Artificial Intelligence, Algorithm Analysis, Machine Learning, Natural Language Processing, Deep Learning

### Vellore Institute of Technology

Bachelor of Technology in Computer Science and Engineering

Vellore, India

GPA: 3.82 | Aug. 2022

## SKILLS

**Frontend Development:** ReactJS, NextJS, Redux, Tanstack, ChakraUI, MaterialUI, WebAssembly, TypeScript, JavaScript, CSS

**Backend Development:** Node, Go, Ruby, Docker, AWS, REST API, 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

Tikr Media

Los Angeles, USA

Aug. 2024 – Dec. 2024

- Develop machine learning models tailored for marketing automation and user acquisition, leading to increased campaign effectiveness and optimized customer targeting.
- Establish robust machine learning pipelines that handle large-scale data processing, ensuring efficient model training, deployment, and monitoring for various operational processes.
- Lead the design and development of backend API and authentication systems that support Marketing and User Acquisition models.

### Software Developer, Frontend

MURF AI

Bengaluru, India

Sept. 2022 – Dec. 2022

- Implemented critical features in video/audio editing studio to enhance usability and make interface user-friendly.
- Analyzed Google Analytics logs to identify and resolve bugs and devise fail-safes, lowering crash rates by 40%.
- Optimized studio for data-intensive projects by applying UI virtualization and modifying data flow across ReactJS components and Redux, making app 5 times faster.
- Collaborated with Customer Success team to upgrade Google Analytics to GA4 while maintaining data consistency.

### Full Stack Software Developer Intern

Velocity Global Solutions

Chennai, India

Jan. 2022 – Apr. 2022

- Overhauled ECG monitoring dashboard by migrating from legacy code to NextJS, boosting performance and ease-of-use.
- Visualized large amounts of patient data through multiple graphs using a customized library built on top of ReactCanvas.
- Developed patient progress interface for doctors in React, enabling multiple patients tracking simultaneously.

### Student Research Intern

Samsung

Bengaluru, India

Dec. 2019 – May 2020

- Designed an Intelligent Text Normalization model for Automatic Speech Recognition systems used in Samsung products, leveraging XgBoost and BERT-based language models, achieving an accuracy of 99.7%.
- Generated slang dataset by scraping popular slang dictionaries and trained lightweight language models such as ALBERT to normalize slang language, improving model accuracy by 4.4%.

## PROJECTS

### Cloud Cafeteria

Summer 2024

- Deployed a restaurant management app using NextJS and Tanstack Query with GoLang server in a docker environment hosted via AWS Fargate instances and CloudFront for low latency.
- Used DynamoDB as database for fast querying and AWS S3 for asset storage and as Data Lake for complex analysis.
- Utilized Firebase for authentications and session management to reduce server load on primary database.
- Leveraged AWS Redshift as data warehouse for analytics and to perform complex aggregations to provide the user with insightful visualizations about sales and customer data.

### Resume AI

Summer 2023

- Leveraged Vercel-AI API and text-streaming to generate resumes and cover letters given user profile and job description.
- Designed user-friendly resume editor and management dashboard with NextJS and ChakraUI, deployed to Vercel.
- Attained scalability, security, and reliability through Firebase for data storage and authentication and Git CI/CD pipelines.

### 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.