

Vivek Patel

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EDUCATION

Arizona State University, Tempe, AZ

August 2022 - May 2024

Master in Computer Science

Grade: 4.0

Related Courses: Cloud Computing, Software Design, Software Security, Data Visualization, Human-Computer Interaction

Pandit Deendayal Energy University

August 2018 - May 2022

Bachelor of Technology in Computer Engineering

Grade: 3.8

SKILLS

Programming Languages Python, JavaScript, Java, C++

Software Engineering React, Node.js, Next.js, Spring, Flask, MongoDB, Git, Typescript, Terraform, Ollama, Embedchain

Systems Engineering MacOS, Linux, System Monitoring, Amazon Web Services, Docker, ChromaDB

WORK EXPERIENCE

Software Engineer II, *University of Phoenix, Inc.*

May 2023 - Current

- Working with Next.js and JavaScript to create robust and responsive components for Adobe AEM, while working closely with Americans with Disabilities Act and SEO requirements.
- Optimized site search page, implemented pagination and search category features, resulting in a significant performance improvement of Google Lighthouse score to a perfect **score of 100 from 27**.
- Spearheaded development of a new microservice** to handle student profile data. Utilized Spring Boot, Java, Elasticsearch, and Docker to storing and querying large amount of data.
- Managed AWS resources such as deployment Pipelines, Elasticsearch, and Kubernetes Instances using *Terraform*.
- Participated in **production support, handled** software monitoring systems and validations.

Software Development Intern, *HackerRank*

January 2022 - June 2022

- Refactored theia extensions to **improve efficiency** of cloud-based Integrated Development Environment **by 70%**.
- Built secured terminal collaboration using *Dockerized containers* and *Web Sockets* to **reduce latency under 120ms, amplifying client's experience** to better understand candidate's coding habit.
- Led effort to **enhance team's productivity** by building real-time comments on engineering diagram tool using React.js, Typescript, Socket.io, and Ruby on Rails.

Software Engineer Intern, *100ms.live*

April 2021 - June 2021

- Established user onboarding flow and analytics in company dashboard. Worked on a Node package to make customizable video conferencing applications based on customer preference.
- Restructured onboarding infrastructure using Vercel, Django, and AWS **improving deployment** to less than **3 seconds**.

Full Stack Engineer, *Webmate Web Services*

July 2020 - February 2021

- Founded platform to provide affordable software and web hosting services to small businesses during covid-19 pandemic.
- Led development team and **worked over 30 clients** from different sectors on business websites and digital marketing projects.

PROJECTS

RAG based Code documentation LLM agent

- Designed microservice for Retrieval-Augmentation Generation application that adapts any code documentation website to feed the data to an LLM agent, which can be used by developers to find accurate information about any code query.
- Developed multi-CPU core crawler service to generate XML sitemaps from documentation base URL, used by my embedchain service to train Open AI's *gpt-3.5-turbo model* with *bge-small-en embedding* model from Hugging Face.
- Employed ChromaDB as vector store for efficient storage and retrieval, ensuring fast and accurate query resolution.

VsCode extension for Browser Compatibility - *650+ installs*

[GitHub](#)

- Published an extension to assist developers in **verifying browser compatibility** for CSS, enhancing coding efficiency.
- Displays compatibility information in IDE upon hovering over CSS elements, significantly reducing need for manual checks.
- Algorithm searches open-sourced Mozilla data, aiding developers in avoiding unstable and obsolete CSS syntax.

Web Simulation of Ubuntu Operating System - *1,00,000+ unique users*

[GitHub](#)

- Innovated a virtual simulation of Ubuntu OS utilizing *Next.js* for server-side rendering and *Tailwind CSS*.
- Deployed using Vercel's continuous delivery network, gaining over **1,000,000 page views**, and over **3500 stars** on GitHub.

Online Interview Platform with Code Compiler

[GitHub](#)

- Parallelized with features such as video conferencing, language IntelliSense, code compiler, and virtual whiteboard, developed a platform for interviewers to conduct technical interviews.
- Made use of AWS Lightsail for setting up and hosting *Express.js* as a Virtual Private Server.