Dev Shah

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PROFESSIONAL EXPERIENCE

Software Engineer Intern, *WILDCAT DISCOVERY TECHNOLOGIES* 🔗   Jul 2024 – Nov 2024 │ San Diego, United States
- Facilitated migration from legacy jQuery codebase to modern ReactJS and TypeScript stack **resulting in 40% of code complexity**, improving **user experience** and **code maintainability** while adhering to version control practices.
- Automated the development environment setup and build process using Docker, docker-compose, and integrated CI/CD pipelines through GitHub Actions and Azure which helped **reduce build-time by 70%** and **minimized manual configuration errors**.
- Programmed algorithms for advanced navigation system in TanStack table to **optimize large-scale battery-cell testing protocols** resulting in a reduction in data analysis time for scientists from **around 60 days to 20 days**.
- Developed low-level interfaces and protocols (e.g. RS485, Modbus) and implemented MQTT protocol to **achieve data transmission** and **real-time device monitoring** to enhance system responsiveness.

Machine Learning Researcher, *San Diego State University* 🔗   Jun 2024 – Aug 2024 │ San Diego, United States
- Collaborated with Dr. Marina Kalyuzhnaya and delivered a **detailed analysis of gene regulation** in the 20ZR WT strain by identifying groups of genes that work together and linking them to specific regulators. Developed custom scripts to process data quickly, analyze results, and confirm findings using bioinformatics tools and statistics.

Software Engineer, *WEB4NEXT* 🔗   Dec 2022 – Jun 2023 │ India
- Secured to 2% among 1500 participants in a hackathon by leading a team to build a Chrome Extension for a **decentralized payment system** for Web4Next. Integrated frontend and backend with ReactJS, NodeJS, and GitLab **delivering a secure payment experience** that streamlines decentralized transactions.
- Managed Kubernetes clusters in Amazon EKS, automating cluster scaling with EC2 instances and leveraging Amazon Auto-scaling for **optimized resource allocation**, **improving application scalability** with less management overhead.
- Configured 6EC2 instances in 2 AWS Regions, with VPC and Auto-scaling to configure secure, scalable, and fault-tolerant infrastructure resulting in a **28% improvement in system uptime**.

Software Engineer Intern, *PERFECT SOFTWARE* 🔗   May 2022 – Nov 2022 │ India
- Used SQL queries to sort and filter vendors based on key parameters like price, delivery time, and product availability, ensuring the selection of the cost-effective options that led to **32% reduction in procurement costs**.
- **Optimized vendor selection** for medicines by using a data-driven approach that improved the company's cost efficiency. Used a combination of PHP, JavaScript, MySQL and bootstrap to achieve this functionality.

EDUCATION

San Diego State University, *Master's in Information Technology, GPA - 3.87*   Aug 2023 – Dec 2025 │ San Diego, United States
- **Coursework:** Data Structure and Algorithms, Enterprise Database Management, AWS Cloud Computing, Business Analytics, Machine Learning, Data Science with Python, Statistical Analysis, Supply Chain & Operations, Financial Reporting

CHARUSAT University, *Bachelor of Technology in Computer Science, GPA - 3.5*   Jul 2019 – Jun 2023 │ India
Served as the **1) Cultural Club Head 2) Vice-Chair, IEEE Computer Society** Coursework: System Design, Data Structures & Algorithms

SKILLS

Programming Languages: JavaScript, Python, C, C++, SQL, HTML, CSS, PHP, Bash Shell Scripting

Libraries/Frameworks: TypeScript, React.js, Node.js, Express.js, GraphQL, Zod, Storybook, D3.js, React Query (TanStack), React Hook Form

Tools/Software: AWS, GitHub, Bitbucket, Power BI, Tableau, Graphana, Prometheus, Postman, Vercel, JIRA, Excel, Kubernetes, Terraform

Database: MySQL, NoSQL, PostgreSQL, DynamoDB │ Foundations: AI, DevOps, CI/CD, Restful API

PROJECTS

Fatal Encounters Data Extractor - Web Data Extraction, *Skills: React.js, Node.js, OpenAI API GPT-4, Google Sheets API, Data Processing* 🔗
- Developed a full-stack web application using React.js and Node.js that leverages **OpenAI's GPT-4o-mini API** to automatically extract news articles about fatal encounters, resulting in a **90% reduction** in **manual data entry time** and **data accuracy**.
- Engineered an automated data pipeline with Google Sheets API integration for real-time **data aggregation**, enabling **analysis across research teams at SDSU** and processing over **100+ articles** with consistent information extraction patterns, maintaining 95% accuracy in data structuring

Heart Disease Detection, *Skills: Python, NumPy, Pandas, Matplotlib, Seaborn, Logistic Regression, Random Forest, KNN, GridSearchCV*
- **Developed and optimized** heart disease detection model using logistic regression, random forest, KNN, and perceptron algorithms, achieving a high precision score of 95% and recall of 96% with the tuned random forest model.
- Conducted **data preprocessing** and **feature engineering** on a dataset of 1,025 patient records, using exploratory data analysis (EDA) and cross-validation to enhance model performance, resulting in a 30% improvement in F1 score compared to baseline models.

Hangman - Word Puzzle, *Skills : Typescript, React.js, Vite, Material UI, Docker, Bootstrap* 🔗
- Designed a word puzzle using React and TypeScript with Material-UI and React-Bootstrap for UI design, and built a CI/CD pipeline with Docker, publishing the project image to a Docker Hub repository which gathered **25+ community pulls**.

CERTIFICATES

- AWS Cloud Practitioner Certificate 🔗