Bhimesh S. Chauhan

EDUCATION

IOWA STATE UNIVERSITY, ELECTRICAL ENGINEERING, ENTREPRENEURIAL STUDIES

EXPERIENCE

Scrubs Co-Pilot, Toronto, CA — *Sr. Full-Stack Software Engineer (Contractor)* APR 2024 – PRESENT
- Designed and implemented an AI-powered ambient platform that passively listens to doctor-patient conversations using a custom fine-tuned Llama 3 model.
- Developed custom note generation extended by Retrieval-Augmented Generation (RAG) techniques.
- Integrated a vector database (VectorDB) for efficient storage and retrieval of contextual information to enhance transcription and save HCPs 80% documentation time.

MicroMart / KitchenMate Inc., Toronto, CA — *Sr. Full-Stack Software Engineer* SEP 2022 – PRESENT
- Developed an interactive dashboard to manage kiosks in real-time, improving operational efficiency.
- Built clients for Modbus RS485 protocols to interface with smart fridges, integrating low-level hardware with software using sockets and servers.
- Led the certification and integration of Heartland payment systems, ensuring PCI compliance.
- Collaborated with external vendors and partners to ensure successful API integrations.

Preply Inc., Boston, MA — *Sr. Full-Stack Software Engineer* OCT 2020 – JUN 2023
- Led a cross-functional team to develop tracking tools for 80K students, enhancing user engagement and retention.
- Increased user conversion by 5% through data-driven experiments and A/B testing.
- Conducted customer interviews to gather insights, driving the launch of 72% scalable product experiments.

DataRobot Inc., Boston, MA — *Full-Stack Software Engineer* JULY 2019 – MAY 2020
- Integrated DataRobot tools with enterprise platforms, improving visibility by **70%** for partners including **Microsoft Excel, Tableau, and Snowflake**.
- Built a **CI/CD pipeline with Jenkins and Kibana**, streamlining deployments and improving delivery speed.
- Developed an **Android application** for remote access to ML models, enabling real-time classification and testing.

Pitchly Inc., Des Moines, IA — *Software Applications Developer* JULY 2018 - JULY 2019
- Designed an MVC architecture around REST APIs, ensuring compliance with OWASP and HIPAA standards.
- Built two GraphQL app to automate data intake and accelerate deck generation, saving clients time and effort.

Nebullam Inc., Ames, IA — *Android Application Developer, Data Scientist* MAY 2017 - AUGUST 2018, SEPTEMBER 2018 - AUGUST 2019
- Developed an Android app to remotely monitor plant growth, increasing aeroponic system yield by 20%.
- Implemented a neural network with PyTorch and TensorFlow to predict plant growth and optimize resource usage.

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SKILLS

Languages: Python (Flask / Django), JavaScript (ES5/ES6), TypeScript, C#, Java, C++, JQuery, HTML5, CSS3.

Frameworks: AWS (Lambda, EC2, S3), Node, React, React Native, Redux, Meteor, Flask, GraphQL, Django, D3.JS, Leaflet, Crossbar, WAMP, Angular, Android, TensorFlow, Keras, Pandas, NumPy, Mezmo, Kibana, Redis.

Other: Git, Agile, MVC, MODBUS, REST API, TDD, Unit Test (chai, mocha, cypress), LINUX, OpenCV, OpenGL, MySQL, MongoDB, Postgres, CI/CD with Jenkins, LLM, and Circle CI.

PROJECTS

AI Connect 4
- Developed an AI-powered Connect 4 game that mimics human decision-making using alpha-beta pruning and decision trees.
- Built with React, Redux, and JavaScript to create a smooth, interactive gaming experience. https://bhimeshchauhan.github.io/projects/

Unity Graphics Procedural Terrain
- Designed a procedural terrain generator using Unity, applying Gaussian transforms and triangulated surface points to create realistic environments.

Sudoku Solver
- Built a Sudoku solver using image processing and backtracking techniques with C++, Python, and OpenCV.
- Improved understanding of problem-solving algorithms and advanced mathematical morphology concepts.

Digital Auto Sales Platform
- Developed a digital auto sales platform with React and Node.js, integrating GraphQL APIs for real-time inventory management.
- Integrated payment gateways and user authentication using Google SSO to streamline transactions.
- Designed a scalable backend with MongoDB to handle multiple dealership inventories efficiently.

Persona Detection System for Language Learning
- Created a persona detection system using Neo4j graph database and KNN algorithms to personalize language learning paths.
- Developed a Flask API to deliver real-time recommendations based on user interactions.
- Optimized graph queries to scale with large datasets, improving engagement and learning outcomes.