Divij Singh Thakur

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WORK EXPERIENCE

NXPRO: Next Generation Professionals   **San Jose, CA**
Software Engineering Intern   *May 2025 – Present*
- Designed and developed full-stack web and e-commerce applications using Java, Spring Boot, Angular, HTML, CSS, and JavaScript, implementing RESTful APIs to enable seamless data exchange between front-end and back-end systems.
- Built and customized WordPress/PHP/MySQL solutions and integrated third-party APIs (such as payment gateways and social media platforms) to enhance application functionality and support ecommerce workflows.
- Developed and optimized SQL queries to improve application performance and data retrieval speed, resulting in more responsive user experiences and faster reporting.
- Implemented machine learning algorithms for predictive analytics (New York Taxi trip duration, Netflix movie recommendation, Pima Indians Diabetes analysis) using Python, Pandas, and scikit-learn to preprocess, clean, and analyze large datasets and derive actionable insights.
- Conducted A/B testing, statistical analysis, and exploratory data analysis/visualization on marketing and customer behavior data, driving a 20% increase in conversion rates and a 10% increase in customer satisfaction, while collaborating with QA and cross-functional teams in Agile ceremonies (stand-ups, sprint planning, retrospectives).

NASA: Psyche Mission (ASU – Marston Theater)   **Tempe, AZ**
Capstone Software Engineering Intern   *September 2025 - Present*
- Building an immersive NASA Psyche 3D show in Digital Sky Dark Matter; authoring real-time control scripts and a Python content pipeline with Git/CI to improve performance for 10,000+ K–12 visitors; packaging for NASA MIEA distribution.
- Collaborating cross-functionally with graphic-design students and theater docents to turn mission science into accessible UX; contributing to sprint planning, and applying accessibility standards, code reviews, and test automation to ensure reliability and maintainability.
- Optimizing complex 3D scenes to improve stability, reduce load times, and validate performance across multi-projector theater hardware.

Semi-Conductor Laboratory   **India**
Software Engineering Intern   *June 2023 – July 2023*
- Conducted statistical analysis on datasets with over 100,000 entries using JMP software, identifying trends and anomalies to support yield improvement efforts in semiconductor fabrication.
- Collaborated on a Java-based automation tool that streamlined data sorting for semiconductor testing logs, reducing processing time by 20%.

PROJECTS

CUDA-Coach – AI Tutor for CUDA & Parallel Computing| *React, TypeScript, Flask, Python, Hugging Face*   *June 2025*
- Built a full-stack AI tutoring platform to help students learn CUDA and GPU-accelerated workflows, with a React/TypeScript front end and a Flask back end exposing RESTful APIs.
- Integrated quantized Mixture-of-Experts models (BitsAndBytes 4-bit) via Hugging Face, designing API endpoints for code analysis, hints, and explanations while managing GPU resources on the server.
- Implemented secure user authentication, session management, and role-based access controls to support integration with university courses and bootcamps.

Bloom – AR Emotion Recognition and AI Wellness Companion| *JavaScript, Node.js, OpenAI API, Socket.IO, MediaPipe*   *April 2025*
- Developed an interactive web application that detects real-time user emotions using facial landmark tracking, enabling dynamic AR visualizations that reflect emotional states.
- Engineered a contextual AI journaling and chatbot system using OpenAI's API, integrated with a gamified wellness tracker featuring streak-based digital garden growth to deliver personalized mental health support and encourage daily emotional check-ins.

TextWise – AI-Powered SMS Learning Platform | *Python, Flask, HTML, CSS, JavaScript*   *October 2024*
- Engineered an SMS-first learning assistant using Flask on the back end and a simple responsive front end for admin/authoring tools, targeting learners in low-connectivity environments.
- Integrated Twilio for SMS delivery and inbound message handling, designing REST endpoints to manage user sessions, content delivery, and progress tracking.
- Connected to the OpenAI API to generate personalized explanations, quizzes, and follow-up questions, tailoring content based on user history and responses.
- Optimized API response paths and caching strategies in Flask, reducing average response time by about 30% and improving perceived responsiveness for users on slow networks.

TECHNICAL SKILLS

- **Programming Languages & Frameworks:** C, C++, Java, Python, SQL, JavaScript, TypeScript
- **Cloud & DevOps:** AWS, Docker, GitHub Actions
- **Databases:** MySQL, PostgreSQL
- **Frameworks and Libraries:** React, Node.js, JavaFX, Flask, PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Hugging Face
- **Web Technologies:** HTML, CSS, REST APIs

EDUCATION

Arizona State University   **Tempe, AZ**
B.S. in Computer Science   *August 2022 - May 2026*
- **Achievements & Leadership:** Dean's list, NAU Scholar, Outstanding Leadership Award, President of Connecting International Communities (750+ members), Program Coordinator Assistant at AZNext (1000+ students), Student Ambassador at Adobe, Campus Partner at Perplexity.
- **Relevant Coursework:** Object-oriented programming and Data Structures, Data Structures & Algorithms, Assembly Language Programming, Theoretical Computer Science, Introduction to Software Engineering, Foundations of Machine Learning, Operating Systems.