

# Divij Singh Thakur

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## EDUCATION

### Arizona State University

Tempe, AZ

#### B.S. in Computer Science

- **Achievements & Leadership:** Dean's list, NAU Scholar, Outstanding Leadership Award, President of Connecting International Communities (750+ members), 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.

## WORK EXPERIENCE

### 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.

### W.P. Carey School of Business (CIS 194: Cloud Foundations)

Tempe, AZ

#### Teaching Assistant & Grader

March 2025 - Present

- Delivered instructional support for CIS 194 by facilitating review sessions to help students prepare for the AWS Cloud Practitioner exam.
- Guided 1000+ students across two cohorts through AWS architecture best practices, bridging gaps between theory and application while fostering a collaborative, cloud-first learning environment.
- Collaborated with faculty to improve student engagement and track learning outcomes; leveraged Salesforce CRM to assist the research team in analyzing participant success metrics and program feedback.

### NXPRO: Next Generation Professionals

San Jose, CA

#### Software Engineering Intern

May 2025 – August 2025

- Designed and implemented full-stack web solutions for WordPress, Shopify, and custom applications using Python, JavaScript (React/Node.js), HTML/CSS, improving client site performance by up to 35% in Lighthouse scores.
- Built and optimized back-end APIs, AI model monitoring tools, and CI/CD pipelines (GitHub Actions, Docker, AWS) to enhance scalability, automate deployments, and ensure compliance with NIST AI RMF guidelines.
- Collaborated in Agile sprints with cross-functional teams, integrating Google Analytics 4 tracking, database optimizations, and responsive UI/UX enhancements to boost user engagement and data-driven decision making.

### School of International Letters & Cultures

Tempe, AZ

#### Technology Support Assistant

January 2024 – March 2025

- Provided technical and logistical support to over 3,000 students and faculty by coordinating space scheduling, delivering services, and maintaining class infrastructure to ensure smooth academic operations. Streamlined library resource management using Koha inventory system.
- Designed and implemented the SILC Cataloging Bot, reducing cataloging time by 50% and minimizing errors in Library resource processing.

### Semi-Conductor Laboratory

Punjab, 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%.

## TECHNICAL SKILLS

- **Programming Languages & Frameworks:** C, C++, Java, Python, SQL, JavaScript, TypeScript
- **Cloud & DevOps:** AWS, Docker, GitHub Actions, CI/CD, Conda
- **Databases:** MySQL, PostgreSQL
- **Tools:** Git, GitHub, JMP Pro, Microsoft Office Suite
- **Frameworks and Libraries:** React, Node.js, JavaFX, Flask, PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Hugging Face
- **Web Technologies:** HTML, CSS, REST APIs
- **Operating Systems:** Windows, MacOS, Linux

## PROJECTS

### CUDA-Coach – AI Tutor for CUDA & Parallel Computing | React, TypeScript, Flask, Python, Hugging Face

June 2025

- Developed an AI-powered tutoring platform to simplify CUDA learning and GPU-accelerated workflows, leveraging quantized Mixture-of-Experts models (BitsAndBytes 4-bit).
- Implemented real-time CUDA syntax guidance, secure authentication, and GPU-backed caching via Hugging Face Hub.
- Built an integration-ready system for university courses/bootcamps, with React/TypeScript front-end and Flask-based backend.

### 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 learning assistant, enabling personalized content delivery via text for low-connectivity users.
- Built and optimized the backend using Python and Flask, reducing API response time by 30% while integrating Twilio for SMS delivery and OpenAI for personalized content. Won the Best Rookie Award for project impact and innovation.