Shlok Desai

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Education

University of Maryland - College Park August 2023 – May 2026

Bachelor's in Computer Science (Honors)

- Courses: Data Structures and Algorithms, Linear Algebra, Introduction to Computer Systems, Discrete Math
- Clubs: Founder of Coding for SDG, Engineer at Terrapin Rockets, Member of Google Student Developer Club
- Honors: President's Scholarship, Dean's List, OMSE Academy of Academic Excellence Award

Skills

Languages: Python, Java, JavaScript, C/C++, HTML/CSS, Kotlin
Skills: Web Development, Data Analysis, Machine Learning, Cloud Computing
Tools and Frameworks: React, Node.js, Django, NumPy, TensorFlow, SQL, AWS, Firebase, Git, Qt

Professional Experience

Machine Learning Intern May 2024 – Present

CogT Lab *Stanford University*

- Engineered a robust preprocessing pipeline for ECG data, including denoising, filtering, and segmenting
- Developed a cross-modal autoencoder integrating ECG and fMRI data to create unique patient fingerprints, facilitating advanced pattern analysis in latent space

Data Analytics Research Assistant December 2023 – Present

ICON Lab *University of Maryland - College Park*

- Designed and launched a paid, web-based cognitive study using JSPsych (JavaScript), successfully engaging 700 participants to analyze memorability across different Pokémon generations
- Employed Matlab and Python to analyze memorability data, and compared results with the RESMEM neural network predictions to demonstrate the influence of familiarity on recall accuracy

Web Developer April 2022 – August 2022

Rcoz.us *Remote*

- Templatized the "Stories" section of the website and converted all stories to a new template using HTML/CSS, JS
- Achieved a 25% increase in viewer retention on story pages

Research Fellow May 2022 – September 2022

UC Irvine Biorobotics Lab *UC Irvine*

- Designed a head mouse for SCI Patients using Solidworks, a CAD application. Prototyped the head mouse using hardware (Breadboard, IMU, circuitry, etc.) and programmed its software (using C++)
- Recipient of UC Irvine research fellowship and California state scholarship

Projects

Venting Diary | *Java, Kotlin, Android Studio* January 2020 – Present

- Conceptualized, designed, developed, and launched a mental health Android app using Java and Kotlin
- Built user-friendly features incorporating UI/UX design, privacy (on-device storage), security (biometric/passcode), multimedia diary entries (text/audio), mood tracker with analytics, and others
- Impacted 7000+ users in 150 countries, with 1000 monthly active users (and growing)

Portfolio Website | *React, Node.js, EmailJS, HTML, CSS, AWS* March 2024 – Present

- Developed a personal website using ReactJS and CSS for frontend & NodeJS for backend
- Includes my past and present projects/publications, resume, contact info, and more

Diagnosing Depression using from Wearable Sensors and ML | *Python, ML* March 2022 – April 2023

- Researched and developed a supervised, binary classification Deep Learning model (Python) to predict MDD using one's activity data achieved 70% accuracy through k-fold validation
- Published in the Journal of Student Research (JSR)

Student Attendance Management System | *C++, Qt, SQL, Database* December 2023 – January 2024

- Developed C++ Attendance System with secure admin/student logins using Qt-designed GUI
- Optimized data handling for efficient student record storage and retrieval in SQL
- Designed robust system for large-scale student data management with enhanced security