SHLOK DESAI

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EDUCATION

University of Maryland - College Park **August 2023 - May 2026**
Bachelor's, Computer Science
- 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

SKILLS

Skills: Python, Java, C/C++, JavaScript, Node.js, React.js, HTML/CSS, Kotlin, Dart, Django, Kotlin, Git, Arduino

RESEARCH EXPERIENCE

Undergraduate Research Assistant at ICON Lab *December 2023 - Present*
- Designed and launched a paid, web-based cognitive study using JSPsych, successfully engaging 700 participants to analyze memorability across different Pokémon generations.
- Employed Matlab and Python to analyze memorability data, and compared results with RESMEM neural network predictions to demonstrate the influence of familiarity on recall accuracy.

Diagnosing MDD using Activity Data from Wearable Sensors and Machine Learning (ML) *March 2022 - April 2023*
- Advisor: Brianna Marsh, a Ph.D. in Computational Neuroscience at UC San Diego
- Thesis: 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
- Publication: Published in the Journal of Student Research (JSR)

Applying Biorobotics to Spinal-Cord Injury Patients *May 2022 - September 2022*
- Group: Prof. Reikensmeyer at UC Irvine Biorobotics Lab
- Product: 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++)
- Awards: Recipient of UC Irvine research fellowship and California state scholarship

The Role of Machine Learning in the Prediction of Particulate Matter 2.5 Concentration *May 2022 - September 2022*
- Advisor: Dr. Emily Hsu, Columbia University
- Synopsis: Reviewed and critically analyzed 7 ML approaches for the prediction of the concentration of PM2.5 in cities
- Publication: Published in UCI GATI Science Journal

PROJECTS & OUTSIDE EXPERIENCE

Venting Diary *January 2020 - Present*
Java, Kotlin, Android Studio
- 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 ~900 monthly active users (and growing)

Student Attendance Management System *December 2023 - January 2024*
C++, Database
- Developed C++ Attendance System with secure admin/student logins and data management
- Optimized data handling for efficient student record storage and retrieval in C++
- Designed robust system for large-scale student data management with enhanced security

Portfolio Website *November 2023 - Present*
React, Node.js, EmailJS, HTML, CSS
- Developed a personal website using ReactJS and CSS for frontend & NodeJS for backend
- It includes my past and present projects/publications, resume, contact info, and more

PROFESSIONAL EXPERIENCE

Rcoz.us **Remote**
Web Developer *April 2022 - August 2022*
- Templatized the "Stories" section of the website and converted all stories to the new template using HTML, CSS, JS
- Achieved a 25% increase in viewer retention on story pages