

Parboni Chattopadhyay

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EDUCATION

University of California, Irvine

B.S. Informatics (Human-Computer Interaction Specialization), Minor in Computer Science

Irvine, CA

Jun 2026

EXPERIENCE

Software Engineer and LLM Product Manager (Contract)

Jul 2026 – Present

Systems Intelligence Health Equity Research Group, North Jersey Management Solutions

New York, NY

- Built a privacy-first desktop application that automates review of sensitive clinical documents for a healthcare research team, cutting review time from 1 hour to a few minutes per document.
- Designed the product around strict privacy and security requirements, so sensitive data stays protected end to end.
- Gathered privacy and usability requirements from researchers, defined MVP scope, and shipped v1, owning the SDLC from design through testing and release.

Software Engineering Intern

Jun 2025 – Sep 2025

Numecent

Irvine, CA

- Engineered a C++ Win32 framework that runs PowerShell scripts across SYSTEM and USER security contexts in a single workflow, enabling enterprise deployments that need both admin and user setup.
- Ensured reliable execution via token validation and privilege-aware CreateProcessAsUserW/LoadUserProfileW calls.
- Built PowerShell/JSON workflows to export and restore Windows users and groups with idempotent imports.
- Cut firewall-rule deployment from 3.76s to 0.05s (RealVNC) and 8.03s to 0.04s (AnyDesk) with bulk PowerShell, 98%+ faster.

Software Engineering Grader

Sep 2024 – Mar 2026

University of California, Irvine

Irvine, CA

- Graded 200+ Python projects per quarter for Intro to Software Engineering, running unit tests and reviewing OOP design.

RESEARCH

Undergraduate Research Software Engineer

Jun 2024 – Present

AI/LLM Education Impact Research

UC Irvine, Donald Bren School of ICS

- Built Python/Pandas ETL pipelines to clean and analyze survey data on generative-AI adoption in software engineering education.
- Scaled analysis of 1,200+ responses with LLM-assisted qualitative coding refined from historical codebooks.
- Automated processing of 14 open-ended survey questions via data dictionaries into reproducible codeword datasets.
- Used one-hot encoding and Cramér's V to link AI usage to satisfaction and integrity concerns (ICCSE 2026 paper).

Undergraduate Research Software Engineer

Jan 2026 – Jun 2026

Pediatric Sleep Research Lab

UC Irvine School of Medicine

- Built a Unity/C# cognitive-assessment game from clinical requirements, winning 2nd Place nationally at Capstone Design.
- Refined age-appropriate interfaces with clinicians through iterative usability testing with 30+ users.

Systems Engineer

Aug 2025 – Dec 2025

NASA L'SPACE Research Program

Remote

- Contributed mission architecture, requirements, and subsystem design to a NASA proposal via trade studies.

PROJECTS

Zot Spot | Angular, TypeScript, Node.js, REST APIs | devpost.com/software/zot-spot

Feb 2025

- Built a real-time menstrual-product availability platform for UC Irvine students with a six-person team, placing 6th at VenusHacks.
- Developed Angular/TypeScript views for location-based inventory, integrated with Node.js low-stock alerts.

HealthHarmonies | HTML/CSS, JavaScript, Figma | parbonichattopadhyay.github.io/HealthHarmonies

Mar 2026

- Developed a mobile-first healthcare resource app improving health-information access for underserved users.
- Designed responsive interfaces using HCI principles and Figma prototyping, meeting WCAG 2.1 AA standards.

AWARDS & PUBLICATIONS

- 2nd Place (National)**, Capstone Design Conference, Texas A&M University | **3rd Place**, UC Irvine ICS Senior Design Expo
- Co-author**, *Student Perceptions and Attitudes Toward AI in Software Engineering Education at an R1 University*, ICCSE 2026
- Featured**, UCI ICS News (2026), for the pediatric sleep-assessment game

TECHNICAL SKILLS

Languages: Python, C++, C#, Java, JavaScript, TypeScript, SQL, HTML/CSS, PowerShell

AI & Data: LLM APIs, LLM Product Management, Prompt Engineering, Pandas, ETL, Statistical Analysis

Frameworks & Tools: Angular, Node.js, Unity, Git, GitHub Actions, Figma

Systems & Security: Win32 API, Windows Security Tokens, Privacy-by-Design

Practices: SDLC, CI/CD, REST APIs, OOP, Code Review, Agile, Requirements Analysis, Usability Testing, WCAG