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Ria Manathkar

Software Engineer & Product Designer

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EDUCATION

Carnegie Mellon University

May 2025

Bachelors in Computer Science and Human-Computer Interaction, Minor in Computer Graphics

GPA: 3.7

Notable Courses: Computer Graphics, Computer Vision, Parallel Computer Architecture, Algorithm Design

Database Systems, Discrete Mathematics, Interaction Design Studio

Activities: Dean's List High Honors, Kappa Alpha Theta (Academic Development Officer), Camp Kesem (Lead Volunteer)

EXPERIENCE

Growth Engineering Intern

May 2024 — August 2024

Product Communications at Patreon

New York, NY

- Implemented 3 experiments that drove fan traffic, membership upgrades, and engagement for over 200,000 creators
- Developed and tested 10+ React components, API routes, and experimental metrics using Node, SQL, and Python
- Collaborated with product, design, data, and engineering teams to execute projects from conception to analysis

Software Development Engineer Intern

May 2023 — Aug 2023

OpsHub/Front-End Engineering at Amazon Web Services

Seattle, WA

- Created a CloudTrail event viewer in AWS OpsHub to support auditing on Snow Devices using React and TypeScript
- Actively engaged with 5+ teams to create a user-centric interface that adhered to Amazon's design principles
- Implemented and tested a robust feature within an Electron application used by millions of customers

Lead iOS Developer

May 2022 — Present

Human-Computer Interaction Institute at Carnegie Mellon

Pittsburgh, PA

- Design UI/UX for iOS mobile app that supports educational materials for women using Figma and Adobe Illustrator
- Develop front-end interface for onboarding, lessons, quizzes and educational content using SwiftUI and XCode
- Lead daily stand-up meetings for a team of five and oversee development, content, and design teams

Teaching Assistant

January 2024 — Present

Computer Graphics, 15-462 at Carnegie Mellon

Pittsburgh, PA

- Support class of 100+ students by leading office hours/recitations, assisting lectures, and grading exams/assignments
- Create 14 weeks of recitation materials, including decks and in-class activities to facilitate learning for 25 students
- Conduct iterative testing and refinement of materials each semester to optimize engagement and understanding

PROJECTS

Scotty3D Graphics Software

Fall 2023

Semester Project for Computer Graphics, 15-462

Pittsburgh, PA

- Engineered a powerful software rasterization C++ module that supports mesh editing and geometry processing
- Implemented path tracing and dynamic animation features, incorporating advanced elements like ray tracing, radiometry, reflectance, Monte Carlo rendering, physically-based animation, and various optimization techniques.

SugarRush Racing Game

Spring 2024

Spring Carnival Semester Project

Pittsburgh, PA

- Handled 3D modeling, animation, and optimizations for a Wreck-it-Ralph themed driving game with over 2,000 users
- Designed characters and game mechanics using Blender and Unity3D, ensuring seamless end-to-end development

SKILLS

Languages

C++, Python, C, Swift, TypeScript, SQL, JavaScript, SML, HTML, CSS, Java, \LaTeX

Tools

React, Figma, Git, XCode, Adobe Creative Suite, Canva, Tableau, Amazon Web Services