Ezra Marks

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EDUCATION:

Brown University   Providence, RI
B.S. Computer Science and A.B. Cognitive Science (4.0/4.0 GPA)   *Expected Graduation May 2022*
- **Relevant Coursework:** Computer Systems · UI/UX · Data Science · Deep Learning · Computer Graphics
- **Leadership:** Lab Manager for Visual Prosthesis Project · Teaching Assistant for Computer Science Intro Course

TECHNICAL EXPERIENCE:

Ab Initio Software   Lexington, MA (Remote)
Software Engineer, Intern   *June - August 2021*
- Designed and implemented new interface for enterprise data quality assessment software; developed front end in TypeScript / React / CSS and back end in Java
- Improved usability while increasing information density by 150%, empowering non-technical users in Fortune 500 companies to perform highly-configurable data quality analysis
- Presented redesign at company-wide meeting and worked with consultants to address feedback for deployment

Develop for Good: Environmental Defense Fund   Stanford, CA (Remote)
Technical Product Manager, Volunteer   *January - March 2021*
- Identified and prioritized MVP requirements for eco-hazard report app, halving development time for team of eight
- Created three user personas to identify customer needs and motivate team of volunteer developers
- Developed REST API for delivering hazard report PDFs via email, programmed in Python and deployed on AWS

Beacon Biosignals   Cambridge, MA (Remote)
Software Engineer, Intern   *February - August 2020*
- Built responsive front end for online EEG viewer using TypeScript / JavaScript, React, GraphQL, Julia, and Docker
- Developed efficient data structures and algorithms for smooth rendering of thousands of interactive UI elements
- Overhauled React state management, significantly increasing development speed and app performance

SOFTWARE PROJECTS:

The UX Factor – Grading from Online Peer Assessment   *January 2021*
uxfactor.cs.brown.edu   Team: Ezra Marks, Sarah Bawabe, Laura Wilson, Tongyu Zhou, Jeff Huang
- Originated concept for instructor-less grading system as a solution to biased TA grading in Brown's UI/UX class, leading to a publication in the PACM Human-Computer Interaction Journal with the Brown HCI Lab
- Implemented algorithms in Python and R for transforming comparative user preferences into assignment grades

Reaction Diffusion – Computer Graphics Simulation   *December 2020*
ezramarks.com
- Built real-time GPU graphics simulation in C++ and OpenGL, modeling chemical interactions on a 2D surface
- Implemented 3D lighting calculations with the Phong model, using bump mapping to visualize the virtual chemicals

Strobe Blocker – Automated Removal of Seizure Triggers in Video   *May 2020*
ezramarks.com   Team: Ezra Marks, Isabel Lai, Alex Ryan
- Implemented real-time video processing to detect and remove seizure triggers for viewers with photosensitive epilepsy; built using Python, NumPy, and OpenCV

SKILLS:

Technical: *Proficient:* TypeScript / JavaScript · Python · Java · React · HTML / CSS · Git · Linux
                      Familiar: C · C++ · AWS · GCP · SQL · GraphQL · Docker · TensorFlow · OpenGL

Design: User Interface and User Experience Design · Prototyping (Figma) · Wireframing (Balsamiq) · Gamification