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SUMMARY

Undergraduate student open to opportunities to leverage human-computer interaction for accessible, user-centered solutions. Background in project-oriented algorithm optimization, user experience/interface design, and system design. I'm excited to continue learning and exploring technology through a creative lens.

EDUCATION

Barnard College, Columbia University

New York, NY

B.A. Computer Science — Intelligence Systems Track

August 2021 - May 2024

- **Relevant Coursework:** Data structures, Object-Oriented Programming, Advanced Programming, Computational Linear Algebra, Digital Game Design, 3D Modeling, Natural Language Processing, Computational Aspects of Robotics

TECHNICAL SKILLS

Languages: Java, C, C++, Python (Numpy, PyTorch), C#, Objective-C, Swift, HTML/CSS, JavaScript (jQuery), MIPS
Graphics, Modeling, Game development: Unity(2D/3D), Adobe Photoshop/Illustrator, Autodesk MAYA, ZBrush
Technologies: Unix/Linux, Git/Github, Embedded Systems (Raspberry Pi/Arduino)

WORK & LEADERSHIP EXPERIENCE

Apple

Cupertino, CA

Software Engineering Intern – Pencil & Paper Team, Intelligent System Experience Org.

May 2023 – August 2023

- Generated shippable features on 12-person team using **Objective-C** and **Swift**, usable by 1.3 billion+ customers.
- Produced public SDK features for PencilKit & VisionKit, exposed to 34 million Apple developers. (**Unreleased**).
- Wrote 20+ tests on an internal team-wide test app, while navigating **Xcode** as first-time **iOS developer**.
- One of eight selected out of the 2023 intern cohort to present new feature to SVP. of Software Craig Federighi.

Barnard Accessible and Accelerated Robotics Lab (A²R Lab)

New York, NY

Research Assistant on Computer Vision in Tiny Robots team | Professor Brian Plancher

October 2022 – May 2023

- Produced 15-paper literature review on visual odometry localization algorithms for the **Raspberry Pi 3 Model B**.
- Conducted validity testing of 3 models on tiny embedded systems to demonstrate constraints of hardware.
- Designed and coded 12+ kernels for CPU optimized computer vision algorithms for low-cost robot hardware in **C++**.

Soros Lab for Artificial Life

New York, NY

Research Assistant on Evolutionary Soft Robots team | Dr. Lisa Soros

September 2022 - Present

- Lead founding evolutionary robots team of 4, translating (**Python to Java**) base and time-optimizing code by 30%.
- Developed soft-robotic Fi2Pop evolutionary algorithm, a critical component spanning a 21-member research lab.
- Collaborated with Dr. Eric Medvet to document 2dMRSIM voxel-based robot simulator software for entire lab usage.

Lifeforce in Later Years (LiLY)

New York, NY

Technical Help Volunteer

October 2021 - Present

- Managed weekly 1-hr workshops for ~10 senior citizens on "how to use your tablet" to enhance technology literacy.
- Provided virtual and in-house technological support (**IT help**) for senior citizens, by-demand (3-5x/week).

PROJECTS

SpyQuest - [Demo Video](#)

September 2022 - December 2022

- Prototyped and developed 3-level immersive 2D platform game in **Unity**, utilizing AI algorithms, rangefinder sensors, and PCG for environment generation and autonomous agents in **C#**.
- Increased accessibility by adding features for color-blind and hearing-impaired (color-grading, screen-shake, etc.).

Computational Sound Keyboard - [Portfolio Link](#)

September 2023

- Prototyped interactive piano-computer mapped keyboard for 2 C-octaves in **HTML/CSS/Javascript**.
- Utilized **WebAudio** to create ASDR envelopes for oscillation and gain nodes to eliminate auditory clipping.

GOALio - [WaffleHacks Link](#)

June 2022

- WaffleHacks 2022 web app submission: GOALio (Awards: Best Beginner Hack, Honorable Mention in Themed UI/UX).
- Designed and programmed front-end interactions in **ReactJS** and back-end database in **Firestore**.
- Materialized a prototype made in **Figma** into a social media platform within a 48-hour time constraint.

Personal Interests: Game design, 3D modeling/art, urban exploration, trying new recipes, and cephalopods!