Kavi Asher Mankoff Dey

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EDUCATION

SEATTLE ACADEMY
High School
June 2022 | Seattle, WA

SKILLS

DIGITAL ART/ FILMMAKING
Experience with multiple aspects of filmmaking including: Screenwriting; Producing; Directing; Editing; Cinematography; VFX
Software: Houdini • Blender • Mari Zbrush • Substance Painter • Nuke Premiere Pro • Davinci Resolve Renderman • After Effects • Audition

OTHER
Roboticist: experience in data science, realtime embedded programming, machine learning, and fullstack development.
Expert: Python • Typescript • Svelte
Intermediate: THREE.js • C++ • ROS Pytorch • Pandas/Matplotlib • Unix Schematic Capture • Altium • Kicad I2C • Trapezoidal and Field-Oriented ESC Design • PIC Programming • MOSFETs
Familiar: C • Android • SQL • Java
Advanced studies including: Proof Analysis; Linear algebra; Multivariable Calculus; Quantum Theory; Inverse Kinematics; Optimization; Machine Learning

PUBLICATIONS

Cabrera, Maria E. et al. ('21). "An Exploration of Accessible Remote Tele-operation for Assistive Mobile Manipulators in the Home". In: *30th IEEE RO-MAN*, pp. 1202–1209. doi: 10.1109/RO-MAN50785.2021.9515511.

Cabrera*, Maria E. et al. ('21). "Cursor-based Robot Tele-manipulation through 2D-to-SE2 Interfaces". In: *IEEE/RSJ IROS*. ***Co First Authors**, pp. 4230–4237. doi: 10.1109/IROS51168.2021.9636008.

Sharif, Ather et al. ('21). "Experimental Crowd+AI Approaches to Track Accessibility Features in Sidewalk Intersections Over Time". In: *ASSETS Adjunct Proceedings*, 65:1–65:5. doi: 10.1145/3441852.3476549.

FILMS

DREAMS | Director
Advanced Film Class, 2022 vimeo.com/640132971
- Scholastic Art & Writing Awards 2022: **Silver Key**

VFX REEL | Director
Advanced Film Class, 2022 https://vimeo.com/582444930
- Rookies Young Guns VFX Contest 2020 and 2019: **Finalist**

THE TREASURE | Director
Prodigy Camp, 2021 https://vimeo.com/582617390

-<(0)>- | Director
Advanced Film Class, 2020
https://www.youtube.com/watch?v=UKOEMBjex0
- Wicked Wales 2021: **3rd in Freestyle**
- Fresh International Film Festival 2021
- Northwest Highschool Film Festival 2021

CRYSTAL CLEAR | Director
Film Class, 2019 https://vimeo.com/524589933
- Plasencia Encorto VII International Youth Film Festival: **Best Photography**
- Wicked Wales 2020: **Highly Commended**
- Scholastic Art and Writing Awards 2021: **Honorable Mention**

EXTRA CURRICULARS

FIRST FRC ROBOTICS | '20-'22 Team Lead | '19 Code Lead
MATE ROBOTICS | '20-'22 Team Lead | '18-'19 Code/Elec. Lead
Sep 2019 - Present | Seattle, WA
- Led diverse 30+ person team in remote and in person settings (FRC)
- Built functional underwater robot from scratch with multi-node realtime custom communication system and UI (MATE)
- Taught electrical engineering and brushless motor control theory, schematic design, PCB design and microcontroller programming. (MATE)
- Won multiple awards: **World Championship Top 10** in MATE Telepresence Competition; **Rookie All Star Award**, FRC: Redshift 8032; **FRC Dean's List Finalist**; **Regional Competition Top 5** in MATE Pacific Northwest Region

PPE-EXCHANGE | Volunteer/Lead Developer
Mar 2020 - June 2021 | Seattle, WA
- Led development of full stack website for Washington State Hospital Association to help hospitals exchange needed PPE during COVID-19.
- Built custom PPE-Distribution algorithm with input from MultiCare

RESEARCH INTERNSHIPS

UW HUMAN-CENTERED ROBOTICS LAB | Intern
2018; 2020-2022 | Seattle, WA
Worked with **Prof Maya Cakmak** and **Maria E. Cabrera** to develop accessible robot tele-operation interfaces. Helped with data analysis of user studies (Cabrera et al. '21). Led interface design and studies of interface alternatives. Co-first authored (Cabrera* et al. '21).

UW MAKEABILITY LAB | Intern
2019 | Seattle, WA

Worked with **Ather Sharif** and **Prof Jon Froehlich** on **Project Sidewalk**. Integrated deep learning-based curb-ramp detection into temporal tracking of sidewalk quality to help those with mobility impairments. (Sharif et al. '21)