Aishwarya Mandyam

aishrm2@cs.washington.edu | linkedin.com/in/aishwaryamandyam | github.com/eyeshoe

Education

University of Washington, Seattle WA

- M.S Computer Science — Expected June 2020
- B.S Computer Science, B.A Philosophy — June 2019

Relevant Coursework: Artificial Intelligence, Machine Learning, Systems Programming Operating Systems, Computational Biology, Neural Engineering, Computability, Algorithm Design, Philosophy of Rationality

Research Interests

Machine Learning for Medicine/Healthcare/Clinical Applications, Medical Imaging Computer Vision

Research Experience

Molecular Information Systems Lab, University of Washington

Nanopore Group led by Jeff Nivala and Luis Ceze — 12/2017 – Present

- Evaluated the results of sequencing from nanopore phasing on custom DNA barcodes to determine their effectiveness and designing new DNA barcodes based off the error analysis results, presented at DNA 25.
- Developed filtering algorithms to account for inaccuracies from nanopore sequencing results.
- Leveraged computer vision tools to process images from a social media campaign to generate more testing data for the DNA data storage project; tools are being used for all images uploaded to the Memories in DNA project.

Allen Institute for Artificial Intelligence, *Research Intern,* Ultrasight — 03/2019 – 09/2019

- Implemented and analyzed custom computer vision models to detect veins and arteries in ultrasound videos, performing better than state of the art models.
- Deployed the best computer vision model to an Android device using Tensorflow Lite and Keras.

UbiComp Lab, University of Washington

Advised by Mayank Goel and Shwetak Patel — 08/2015 – 01/2017

- Built an Android app that bypasses Android kernel to generate custom responses to touch screen events to improve the phone screen's performance under exposure to rain.

Industry Experience

Sage Bionetworks, *Research Engineering Intern,* Bridge Team — 09/2018 – 03/2019

- Worked on an Android app to measure Cardiorespiratory Fitness to be used in a National Institute of Health study.
- Developed a feature to teach users how to measure their heart rate using a smartphone camera and provide feedback about their performance.

Microsoft, *Machine Learning Intern*, Xbox Machine Learning and Artificial Intelligence — 06/2018 – 09/2018

- Designed and implemented an ML feature to detect highlight clips from game streams to enable gamers to share the best parts of their gameplay sessions, increasing the visibility of the Xbox gaming environment.
- Implemented a set of Deep Learning models to quantify how likely a video frame is to promote engagement in the form of likes, views and shares.

Microsoft, *Software Engineering Intern*, Xbox Shell Speech — 06/2017 – 09/2017

- Built an end-to-end prototype that allows users to control the Xbox using Amazon Alexa and Cortana Assistant. Prototype was expanded to create a shipped feature and covered in The Verge, TechCrunch, IGN, Geekwire.

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- Developed digital assistant voice skills (C# and Node.js), Azure APIs (C#) and implemented native Xbox responses (C++) to the API calls to provide gamers with hands-free control of the Xbox.

Microsoft, *Explorer Intern*, Outlook Satisfy Team 06/2016 - 09/2016

- Developed and deployed a C# Outlook plugin to help employees view information about their support tickets.

Expedia, *Software Developer Apprentice*, Cruise Team 06/2015 - 08/2015

- Implemented a responsive web design for 4 cruise shopping pages; project shipped at expedia.com/cruises.

Awards

Husky 100 (2018)
TUNE House Scholarship (2015, 2016)
NCWIT Affiliate Award (2015)
Undergraduate Service Award (2019)
ACM Student Research Competition 2nd Place (2019)

Publications and Posters

Aishwarya Mandyam, Katie Doroschak, Karen Zhang, Melissa Queen, Karin Strauss, Jeff Nivala, Luis Ceze. "Reducing Identification Time in a Molecular Tagging System", Grace Hopper Conference 2019, ACM Student Research Award 2nd Place.

Katie Doroschak, Karen Zhang, **Aishwarya Mandyam**, Melissa Queen, Karin Strauss, Jeff Nivala, Luis Ceze. "Molecular Tagging with nanopore-orthogonal DNA strands", DNA25 2019 Seattle WA

Teaching Experience

UW CSE 415 *Artificial Intelligence, TA* 09/2019 – 12/2019

Volunteer Experience

UW Association of Computing Machinery *Chapter President, Event Coordinator* 06/2016 – 06/2018

- Led the organization responsible for all events for the undergraduate CS community of 1200+ students, faculty, staff

DubHacks, *Co-Director* 05/2016 – 11/2017

- Co-Directed DubHacks, the largest collegiate hackathon in the Pacific Northwest. This hackathon advocates for the importance of diversity, inclusion, accessibility, and representation in technology by creating a platform where individuals of all backgrounds come together to develop solutions that solve society's biggest issues.
- Created and managed a $120k+ budget, contributed 250+ git commits to technical tools and website, raised over $50k in sponsorships, managed relations with sponsors and volunteers