

Work Experience

SDE Intern @ Amazon (Music ML)

Jun 2022 - Sep 2022

Developed and executed experiments to improve Amazon Music artist recommendations

- Implemented end-to-end pipeline running AWS services using Python, Typescript, Java, and AWS CDK

Research Assistant at UCSD (BergLab/Hao Su's Lab)

Aug 2021 - Jun 2022

Conducted research at the intersection of vision and language advised by Hao Su and Taylor Berg-Kirkpatrick

- Experimented with state-of-the-art zero-shot learning methods and OpenAI's CLIP using PyTorch

Undergraduate Honors Research Program at UCSD

Sep 2020 - Jun 2021

Conducted independent research in the field of optical music recognition advised by Taylor Berg-Kirkpatrick

- Designed a new state-of-the-art approach to end-to-end optical music recognition using PyTorch
- Work published in International Society for Music Information Retrieval (ISMIR) 2021

Computer Architecture Intern at NVIDIA

Jun 2020 - Sep 2020

Developed infrastructure to improve safety and security of the Tegra SoC

- Wrote scripts with Python to implement new flows into chip build process and to improve safety efforts

Intern at mCube

Aug 2019 - Sep 2019

Tested sensors for precision and reliability

- Tested power delivery and linearity of gyroscopes
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Projects

Yip (SWE Course Project)

Mar 2020 - Jun 2020

Worked in a team with nine others to create an online community-driven review platform inspired by Reddit

<https://gitlab.com/cse110-sp20/yip>

- Developed using the Rust, React, PostgreSQL, and hosted using AWS EC2
- Wrote entire backend including API/database functions using Rust, and architected the application

Mile High Restaurant (HackXR 2019 - Grand Prize Winner)

May 2019

Created a game in virtual reality in 48 hours that brings the user a high-intensity cooking experience

<https://devpost.com/software/mile-high-restaurant>

- Developed using the HTC Vive, SteamVR, and Unity
- Wrote scripts using C# and designed the gameplay/models

IEEE Autonomous Line-Following Vehicle (2nd Place Track Performance)

Oct 2018 - Jun 2019

<https://github.com/sachindae/IEEE-Autonomous-Line-Following>

Worked in a team with four others to create an autonomous line-following vehicle

- Developed using an Arduino Uno, line scan camera, and servo
- Wrote algorithms using C++ to filter raw data from camera and follow the line at high speeds

SpeakCode (SDHacks 2019)

Oct 2019

Created a web IDE for Javascript using Express that provides users the ability to code with their voice

<https://devpost.com/software/speakcode>

- Developed using Node.js, Microsoft Azure API, and hosted on AWS Beanstalk
- Wrote code to link the front-end and back-end as well as language processing algorithms

Lead Autonomous Software Developer for FRC Robotics Team

Aug 2016 - May 2018

Led the development of the autonomous control of a robot for FRC

- Designed algorithms utilizing cameras, gyroscopes, accelerometers, and sonar with Java and OpenCV
 - Taught new programmers basic software engineering practices
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Skills/Awards

Languages/Software: Java, Python, C/C++/C#, Rust, JavaScript, Assembly, PyTorch, Unity, OpenCV

WIC Beginner's Programming Competition 2nd Place (UC San Diego)

Dec 2018

Computer Science Student of the Year (Corona del Sol High School)

2016, 2017

Corona del Sol High School Valedictorian (Class Size ~ 700)

May 2018

Education

MS Computer Science (AI Specialization), UC San Diego (3.9 GPA)

Sep 2021 - Dec 2022

BS Computer Science, UC San Diego (3.9 GPA w/ Highest Distinction)

Sep 2018 - Jun 2021

Relevant Courses: Computer Vision, Deep Learning, Advanced NLP, ML for Robotics, Machine Learning, AI Search and Reasoning, Recommender Systems and Web Mining, Computer Graphics, Operating Systems, Computer Networks, Computer Security, Computer Architecture, Advanced Data Structures/Algorithms, Programming Languages: Principles/Paradigms

Publications

- **Sachinda Edirisooriya**, Hao-Wen Dong, Julian McAuley, and Taylor Berg-Kirkpatrick, "An Empirical Evaluation of End-to-End Polyphonic Optical Music Recognition," Proceedings of the 22nd International Society for Music Information Retrieval Conference (**ISMIR**), 2021.