

Ibrahim Syed

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EDUCATION

Oregon State University, Corvallis, OR

Class of 2024

Bachelor's Degree in Music Production

Bachelor's Degree in Computer Science with a focus on Data Processing

RELEVANT COURSEWORK & SKILLS

Skills: Web development (React.js, Node.js), programming fundamentals (C++, Python, JavaScript), data processing (Pandas, NumPy), sound programming (Max/MSP, Pure Data), audio engineering (mixing & mastering), music production and sound design (Ableton Live, Pro Tools)

Relevant Coursework: Data Structures, Analysis of Algorithms, Web Development, Software Engineering, Computer Architecture and Assembly Language, Operating Systems, Computer Networks, Database Management Systems

PROJECTS

Historicle: A Browser Game

January 2024 – present

- Developed a browser-based game where the player guesses a daily-rotating target year based on given historical events.
- Created a script to interface with a public API to update the site on an automatic schedule using GitHub Actions.
- Implemented using React in TypeScript and deployed to the web via Netlify.

WeatherChimes: An Open IoT Weather Station and Data Sonification System

September 2022 – July 2023

- Built an IoT software system designed for data sonification and visualization using the Max/MSP platform and programming environment in conjunction with Node.js JavaScript modules
- Created a live, dynamically updating data processing platform to interface with weather sensors across the country using MongoDB
- Wrote a step-by-step tutorial series geared toward end users ranging from high school students to graduate-level researchers to illustrate use of the program in data analysis of weather trends

Toward Generative Sound Cues for Emotive Musification

January 2022 – June 2022

- Designed a system which creates dynamic, generative musical cues for robots using Pure Data, a visual programming language for multimedia.
- Applied ideas from previous research in human-robot interaction, music cognition, and robot sonification.
- Conducted a study with $N = 26$ participants demonstrating the generative sounds caused human listeners to perceive the robot as being more friendly.
- Presented the corresponding paper at the 2022 International Conference on Auditory Display (ICAD).

SonifyIt: Towards Transformative Sound for All Robots

March 2021 – February 2022

- Integrated robot middleware (ROS) with a visual programming language for multimedia to design tools for roboticists and sound designers to design sound for robots.
- Conducted a survey study showing the sound system made robots seem warmer, happier, and displayed positive affect.
- Corresponding paper was accepted for presentation at 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) and publication in the IEEE Robotics and Automation Letters (RA-L).

WORK EXPERIENCE

Nasiha Solutions

Woodland, CA

Data Analyst

February 2024 – present

- Developed Python scripts to organize, clean, and analyze operational data for Movement4Life, a nonprofit organization focused on preventing and interrupting gun violence among youth in the Sacramento area.
- Wrote analytical reports to submit for grants, providing tangible insights as to the organization's effectiveness based on gun violence statistics.

College of Engineering (Oregon State University)

Corvallis, Oregon

Undergraduate Learning Assistant

April 2022 – July 2023

- Studios: Taught students the fundamentals of data processing in Python (numPy and Pandas) and object-oriented programming in C++11 in weekly labs focused on data analysis and object-oriented programming.
- Office Hours: Assisted students in deepening their understanding of course material both in-person and remotely via Discord.
- Grading: Responsible for grading assignments for up to 150 students bi-weekly.

Office of the Dean of Students (Oregon State University)

Corvallis, Oregon

Support Coordinator

September 2019 – April 2022

- Worked in a case management setting handling confidential student information.
- Assisted students in crisis and in high stress and emotional situations.
- Managed time to complete secondary projects such as website updates and infographic designs alongside day-to-day tasks.
- Provided reception services both in-person and remotely using Outlook and Zoom.
- Communicated with co-workers, supervisors, faculty, and staff in other departments to navigate university processes and triage support resources for students.