Kavan Mehrizi

(510) 875-5091 • kavanmehrizi@berkeley.edu • kavanmehrizi.com • in/kavanmehrizi

EDUCATION

University of California, Berkeley, Berkeley, California — Expected December 2024
Bachelor of Science, Electrical Engineering and Computer Sciences — Cumulative GPA: 3.3
CS GPA: 3.5

Relevant Coursework: Structure and Interpretation of Computer Programs, Designing Information Devices and Systems I & II, Foundations of Data Science. Data Structures, Ethics, Engineering, and Society, Introduction to Technology Entrepreneurship & Innovation, Fall 2023: Discrete Mathematics and Probability Theory, Introduction to Artificial Intelligence, Principles and Techniques of Data Science

Diablo Valley College, Pleasant Hill, California — January 2020 – May 2022
Associate of Science, Computer Science — Cumulative GPA: 3.91
Associate of Science for Transfer, Mathematics — Major GPA: 4.0
Associate of Science for Transfer, Physics

Relevant Coursework: Program Design and Data Structures, Object-Oriented Programming, Advanced C & C++ Programming, Python Programming, Programming with Java, Linear Algebra

HONORS AND GRANTS

Graduated with Honors (2022)
Milagros Ojermark Academic Transfer Scholarship (2022)
Academic Honors (2020-2022)
AGS Member of the Month (2021)
Hopper-Dean Foundation Funding Recipient (2021)
Google Top Photographer (2019)

RESEARCH EXPERIENCE

Amazon Science, University of California, Los Angeles
SURE AI/ML Researcher, June 2023 – Present
Advisor: Abeer Alwan
Researching accent and dialect bias with Automatic Speech Recognition (ASR) systems, specifically on OpenAI Whisper and African American Vernacular English (AAVE). Focusing on question-answering (QA) extraction using Hugging Face DeBERTa & Meta LLaMA-2 while fine-tuning Whisper with the Corpus of Regional African American Language (CORAAL) dataset. By utilizing Meta's LLaMA-2 and fine-tuning Open AI's Whisper ASR system, preliminary results show improved QA performance compared to conventional question answering models.

Carnegie Mellon University, Software and Societal Systems Department
Software Engineering Researcher, May 2022 – August 2022
Advisors: Christian Kästner and Bogdan Vasilescu
Developed Python NumPy/Pandas data-mining scripts to determine maintainers of the top 30,000 most popular GHTorrent GitHub repositories. Deduplicated ~5.6 million rows of contributor commit data by merging commit author aliases together and aggregated maintainers based on the definition of contributors responsible for top 80% of total project commits in a year. Identified ~584,000 distinct contributors, and ~110,000 maintainers to be interviewed to understand the motivations behind open-source software maintainers.

University of California, Berkeley, Department of Mechanical Engineering
Robotics Researcher, June 2021 – August 2021
Advisor: Koushil Sreenath
Independently developed a speech interface for a robotic guide dog to facilitate direct, vocal human-robot interaction utilizing Python with AWS Amazon Polly and Google Cloud Speech-to-Text APIs. Allowed for understanding vocal commands and a customizable wake word to activate the guide dog. Navigated based on user's request by publishing predetermined coordinates to guide dog's navigation target node. Allowed for independence of guide dog by eliminating the need for a computer to manually send commands to the guide dog by integrating a speech interface into the existing infrastructure utilizing C++ and ROS. Presented research at multiple symposiums to a total of 300+ attendees and wrote student paper that was cited by Google Research/DeepMind.

PAPERS & PRESENTATIONS

Institute for Software Research Poster Symposium, Carnegie Mellon University, Pittsburgh, PA, August 2022. Mehrizi, K. "No Need to Fear, a New Maintainer is Here!: Understanding Motivations Behind Open Source Maintenance Work" (poster).

Mehrizi, K, "Quadrupedal Robotic Guide Dog with Vocal Human-Robot Interaction," ArXiv, abs/2111.03718 [cs.HC], November 2021. (student paper)

College of Engineering Undergraduate Research Poster Symposium, Berkeley, CA, October 2021. Mehrizi, K. "Quadrupedal Robotic Guide Dog with Vocal Human-Robot Interaction" (poster).

Transfer-to-Excellence Summer Research Symposium, University of California, Berkeley, CA, August 2021. Mehrizi, K. "Quadrupedal Robotic Guide Dog with Vocal Human-Robot Interaction" (lecture).

LEADERSHIP EXPERIENCE

EECS Transfers at Berkeley Student Organization
Vice President, Co-Founder, October 2022 – Present
Created the first student organization at Berkeley specifically aimed to build a community and provide resources to ensure academic and career success for transfer students interested in the fields of EE/CS. Plan and host exam preparation workshops and events for 30+ members.

Alpha Gamma Sigma Honor Society
Newsletter Editor, Webmaster, Permanent Member, August 2021 – May 2022
Produced and distributed weekly newsletters and managed chapter's website for our 90+ prospective and current members. Collaborated with executive board and planned 30+ weekly activities and events for the honor society.

MEMBERSHIP

Society of Hispanic Professional Engineers (2023-Present)
Society for Advancement of Chicanos/Hispanics & Native Americans in Science (2023-Present)
EECS Transfers at Berkeley (2022-Present)
Puente at Berkeley (2022-Present)
Financial Education Association of Berkeley (2022-Present)
UC Berkeley IEEE Branch (2022-Present)
IEEE (2021-Present)
IEEE Computer Society (2021-Present)
IEEE Digital Reality (2021-Present)
Technical Community on Software Engineering (2021-Present)
DVC Physics Club (2022)
IEEE Robotics and Automation Society (2021-2022)
Transfer Alliance Project (2021-2022)
Google Student Developer Club (2021-2022)
DVC Math Club (2021-2022)
DVHackers (2020-2022)

PROJECTS

NGordnet
Java, Data Structures, Data Analysis/Visualization, Datasets
Developed backend for a browser-based tool for analyzing history of word usage in Google's Ngram dataset using a modified TreeMap class. Implemented ability to find hyponyms using the WordNet dataset by merging and comparing synonym sets.

Boxing Bag Sensor
Arduino, C++, Circuits
Created a punch counter utilizing a piezo sensor, LEDs, and display that gained values from sensor to determine if disturbance was a punch based on a predetermined threshold.

TECHNICAL SKILLS & HOBBIES

Computational: Python, Java, C++, SQL, HTML/CSS, NumPy, Pandas, Arduino, Git, PyTorch, C, R

Laboratory: UC Fundamentals of Laboratory Safety Training (EHS 101), Workplace Safety Program (EHS 502), Laboratory Safety Awareness Training for Support Personnel (EHS 104)

Extracurriculars: Avid skier, devoted film & digital photographer, soccer (goalkeeper), 3D printing, automation tinkering – microcontrollers, open-source software, IoT

LANGUAGES

English (fluent)
Farsi (fluent)
Spanish (knowledgeable)