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Nabeel Sabzwari

PROFESSIONAL OBJECTIVE

Prospective graduate student in the field of computer science with excellent academic credentials, 2 years of experience in software development, and the determination to improve human health using technology.

EDUCATION

Bioengineering, B.S., UC Berkeley (GPA: 3.88) Expected Grad. 12/2022

Relevant Coursework: *Bioinstrumentation, Computational Biology, Data Structures and Algorithms, Foundations of Data Science*, *Introduction to Robotics*

Awards: Dean's List (2021), Honor's to Date, S-STEM Transfer Pathway Scholarship

LANGUAGES AND TECHNOLOGIES

Arduino, C++, Git, Java, JavaScript, LTSpice, MATLAB, OpenCV, Python, ROS, React, SQL

PROJECTS

Bioinstrumentation

DIY Electrocardiogram 02/2022 - 03/2022

Designed an ECG using knowledge of instrumentational amplifiers, filters, and an Arduino.

Computational Biology

Protein Analysis using Alphafold2 11/2021 - 12/2021

Visualized different metrics using Python to determine the effectiveness of AlphaFold2's protein folding algorithm on TFEα, a protein not previously used in its training.

Data Structures and Algorithms

NGordnet 10/2022 - 11/2022

Designed a program in Java that outputs a line plot of a given English word's usage over time and a list of the word's hyponyms.

2048, UC Berkeley - Berkeley, CA 08/2022 - 09/2022

Implemented principles of OOP and modularization in Java to recreate the popular tile game, 2048.

Foundations of Data Science

Cook County Housing 10/2022 - 11/2022

Utilized visualization and linear regression techniques in Python to uncover crime in Chicago's Cook County.

Introduction to Robotics

Autonomous Flying with AR Parrot 2.0 10/2022 - 12/2022

Designed a system using ROS and Python for an AR Parrot Drone 2.0 to autonomously pick up a payload and fly to a specified location.

EXPERIENCE

Undergraduate Research Apprentice, UC Berkeley - Berkeley, CA 09/2020 - 11/2022

Wrote an embedded program using Python for interactivity between a Raspberry Pi and Arduino for a dialysis device in the lab of Dr. Waqas Khalid through Berkeley's URAP program.

Designed front-end Python code hosted on a Raspberry Pi using Qt Creator to be utilized by doctors as a GUI.

Bioengineering Intern, Xtrava Health - Santa Clara, CA 06/2022 - 08/2022

Wrote a parser to clean over 500 scanned tests on the performance of Xtrava Health's COVID-19 test kits at different temperatures and concentrations of virus.

Implemented Python scripts to visualize and pinpoint improvements in Xtrava's COVID-19 detection algorithm.

BIOEHSC Mentor, UC Berkeley - Berkeley, CA 01/2021 - 04/2021

Mentored 4 students from California High School for the Bioengineering Honor Society Competition in developing a novel technique utilizing AAV capsids and CRISPR technology to treat Parkinson's disease.