Simon Yan

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EDUCATION

University of California, Santa Barbara   September 2023 – June 2027
Bachelor of Science in Computer Science   *Goleta, CA*
Relevant Coursework *Data Structures and Algorithms, Deep Learning, Object Oriented Design, Linear Algebra*

EXPERIENCE

Data Analytics Research Internship   December 2021 – May 2022
University of California, Santa Cruz   *Santa Cruz, CA*
- Researched renewable energy sources and electric load forecasting using advanced machine learning algorithms
- Built Python programs leveraging various regression models, neural networks, and compared results with ARIMA for time series forecasting
- Delivered comprehensive analysis on the efficiency and accuracy of different training methods and models

Robotics Program Founder and Mentor   July 2019 – August 2022
VISION X INC.   *Saratoga, CA*
- Established a nonprofit summer program focused on promoting robotics education for middle school students
- Partnered with a local STEM teacher to provide VEX robotics kits and lecture materials
- Mentored students in building and programming robots, including a line-following robot and a flywheel ball launcher
- Raised over $5,000 in donations to support local middle and high school robotics teams

PROJECTS

Brainwave | *Firebase, Firestore Cloud, Flutter, Dart*   January 2024
- Developed a social media-style mobile app for students to find and join study groups using Flutter and Dart
- Implemented Firebase backend to store user data and securely manage real-time chats using Firestore Cloud
- Integrated Google Authentication for secure user registration, login, and logout features
- Created interactive features like post liking and private chats to enhance student collaboration
- Designed a user-friendly interface that allows students to easily discover and join study groups

Red Wine Quality Calculator | *Python, React, Javascript, SingleStore Notebooks*   February 2024
- Built a React web app with sliders and bar graphs, enabling users to refine key variables affecting wine quality
- Analyzed the Red Wine Quality dataset in SingleStore, trained multiple machine learning models, and selected linear regression for 97% accurate wine quality predictions
- Provided content on four key variables affecting wine quality, helping users optimize their winemaking process
- Placed second in the SingleStore x Data Science UCSB x Coders SB Datathon

Worldly Bites | *Python, Flask, TensorFlow, React, Javascript, Expo Go*   March 2024 - August 2024
- Created a mobile app that connects users with recipes from different cultures around the globe
- Integrated two ingredient input methods: manual entry and camera scanning with an object detection model for 40 ingredients
- Utilized a TF-IDF model to search and recommend the top 5 recipes based on user-provided ingredients, with over 13,000 standardized recipes
- Designed a cuisine prediction feature with a model classifying recipes into more than 20 different cuisine types

Sorting Robotic Arm | *Python, TensorFlow, Raspberry Pi*   September 2024 - Present
- Collaborated on a 3D-printed hardware project, focusing on software development
- Built an object detection model on a Raspberry Pi 4B to classify prisms of different shapes
- Programmed the claw mechanism to accurately handle and sort detected shapes into different piles

TECHNICAL SKILLS

Languages: Python, C++, JavaScript, HTML/CSS
Frameworks: TensorFlow, React, Flask, Bootstrap, Flutter
Libraries: pandas, NumPy, Matplotlib, Scikit-learn