NATHAN (YANG) WU

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Education

University of California, Santa Barbara (UCSB) **Santa Barbara, CA**

B.S in Computer Science *Expected Graduation:June 2021*

B.S in Statistics and Data Science *Expected Graduation:June 2021*

- GPA: 3.81/4.00
- College of Engineering Honor Program
- Early Research Scholar Program (12 students out of the class of 2021)
- Relative Coursework: Machine Learning (A+), Time Series (A), Data Structure and Algorithms (A+), Stochastic Process, Translation of Programming Languages (A), Computer Architecture (A+), Advanced Applications Programming (A), Regression Analysis (A), Probability Theory (A), Automata and Formal Language (A)

Experience

Research Assistant (Mentor: Michael Beyeler) **Santa Barbara, CA**

Bionic Vision Lab - UCSB *Jan . 2020 - Present*

- Creating an Virtual Reality environment that simulates blind people's vision restoration results
- Implementing shaders in Unity that process input images to achieve various visual results

Undergraduate Tutor **Santa Barbara, CA**

Department of Computer Science - UCSB *Sep. 2019 - Dec. 2019*

- Tutored for undergraduate lower division Computer Science class, CS16, which introduces fundamental CS concepts in C++
- Assisted students with their coding assignment each week by reviewing over 5000 lines of code and giving away problem solving techniques
- Helped the students to reason about their code by tracing through it and communicating the logic

Undergraduate Researcher (Mentor: Tobias Hollerer) **Santa Barbara, CA**

UCSB - Four Eyes Lab *Sep. 2018 - Jun. 2019*

- Built an VR visualization of Rattle Snake Canyon based on the real elevation data and high resolution aerial image with Unity game engine and Microsoft MRTK toolkit
- Designed an VR interface for users to have a more intuitive interaction with the VR environment
- Conducted user study and collected data for analysis

Projects

Time Series Analysis on the US Employment-Population Ratio Jun. 2020

- Wrote R code to analyze the US Employment-Population Ratio data and composed a final written report
- Used Box-Jenkins method to construct a prediction model that accurately predict the trend in 12 months ahead

Author Attribution Task With Machine Learning Method Jun. 2020

- Analyzed text data in Python with Scikit-learn library
- Built classification model with machine learning method

Spring Boot Web Application Sep. 2019

- Created a Spring Boot Web application with Java that is being hosted on Heroku, set up Travis CI for auto testing
- Used third-party API like GitHub OAuth for login and USGS API for retrieving geographical data
- Website: https://cs56-f19-lab07-nathanwoo.herokuapp.com/

Skills

- Programming Languages: Proficient in Python (NumPy, Pandas, Matplotlib, Scikit-learn), C++, R, C#, Java, HLSL
- Computer Skills: Proficient in GitHub workflow, Django, SQL, HTML, CSS, Unity,
- Languages: Native in Mandarin Chinese, proficient in English