ERIC CHU

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Education

University of California, Los Angeles — Los Angeles, CA
Bachelor of Science in Mathematics of Computation — *Oct. 2020 – Dec. 2024*

The Wheatley School — Old Westbury, NY
High School: 13 AP Courses, Video Club President, NHS Officer, Symphonic Band — *Sep. 2016 – June 2020*

Work Experience

Lifeguard — June 2019 – Sep. 2021
The Town of North Hempstead — *North Hempstead, NY*

- Received excellent work assessment

Projects

Election Classification Models | *R, Tidyverse, Tidymodels RMarkdown* | *Course: Stats 101C* — Aug 2024

- Created models to predict US presidential election winner in each county based on its demographics
- Performed data cleaning, exploratory analysis, mining, modeling, and visualization
- Used Tidyverse and Tidymodels to create workflow, k-nn predictive model, tune parameters, and calculate metrics
- Wrote final report on RMarkdown

NFL Data Journalism Article | *SQL, Python, Pandas, Seaborn, Markdown* | *Link to article* — Apr 2024 - Sep 2024

- Authored article which statistically analyzed several notable NFL quarterbacks' reliance on their top receivers, published by UCLA's sports analytics club (Bruin Sports Analytics)
- Used SQL to query through CSV files containing the stats for every NFL receiver per season in order to acquire the stats for each team's top receiver in any given year
- Used Python and Pandas to process, calculate, clean, and analyze data
- Visualized the data using Seaborn and wrote article on Markdown

NFL Predictive Models | *Python, Pandas, Scikit, Seaborn, Matplotlib* | *Course: CS M148* — Sep 2023 - Dec 2023

- Co-developed models which used stats from the NFL over the course of several seasons to predict each team's success in regular and postseason
- Used Python, Pandas and Scikit to create linear regression models for number of regular season wins and logistic classification models for which postseason round a team would likely finish in
- Used Numpy and Scikit for bootstrapping, training and testing data split, collecting metrics, and other techniques
- Created visuals of the findings using Seaborn and Matplotlib

SaveStates | *JavaScript, React-Bootstrap, CSS, Git, HTML* | *Course: CS 35L* — Sep 2021 - Dec 2021

- Co-developed website which allowed users to log their playthroughs of video games
- Contributed to front-end implementation of site
- Enabled users to upload forms as data structures to backend databases

GhostRacer | *C++* | *Course: CS 32* — Nov. 2020

- Developed a video game using principles of object oriented programming
- Created data structures that used inheritance and polymorphism
- Practiced C++ manual memory management

Technical Skills

Languages: Python, C++, SQL (Postgres), JavaScript, HTML/CSS, R, LaTeX, Markdown, Shell
Relevant Coursework: Data Mining, Machine Learning, Algorithms, Data Stuctures, Mathematical Optimization, Probability, Software Construction, Game Theory, Financial Mathematics, Actuarial Science, Calculus, Linear Algebra, Differential Equations, Discrete Structures, [Real, Complex, and Numerical] Analysis
Developer Tools: Git, VS Code, xCode, Tableau, Microsoft Office, CLI, Homebrew, Conda, Jupyter-Notebook
Libraries and Frameworks: Pandas, Numpy, Scikit, Tidyverse, Matplotlib, Seaborn, React, Node.js, Gatsby