Wang Hao(Nelson) Shih

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EDUCATION

University of California, Berkeley *Bachelor's Degree* Aug 2022 - Dec 2024

Major: Data Science & Political Economy **Concentration**: Business/Industrial Analytics

Coursework: Inference, Optimal Control, Machine Learning, Data Structure

Certificates: Google Data Analytics Professional Certificate, IBM Machine Learning Specialization

SKILLS

Programming Languages: Java, Python, R, SQL, HTML, CSS, JavaScript

Tools/Software: MongoDB, PostgreSQL, Pandas, Matplotlib, Seaborn, Scikit-learn, IntelliJ, Microsoft Visual Studio Code, R Studio

PROJECTS

Interactive World-Building | *Java Data Structures*

- Implemented user interaction in a 2D procedurally generated world allowing avatar movement and deterministic gameplay via keyboard.
- Designed a Heads-Up Display (HUD) to provide real-time information for an immersive experience.
- Ensured system determinism by integrating a pseudo-random generator, producing identical outcomes for the same seed and input sequence.
- Incorporated modular code design with Java StdDraw for input handling and rendering.

Image Recognition and Machine Learning | *ml5.js p5.js JavaScript*

- Built an Image classifier for recognizing objects in real-time.
- Built a Gesture-based music player that uses trained models to control playback.
- Built a Customizable Doze Detector using FaceMesh, allowing users to train the model with their snoozing images.

Advanced Business Data Analysis and Machine Learning Project | *R Studio*

- Refined data using filtration, imputation, and PCA, preparing for predictive modeling.
- Developed Neural Networks and Support Vector Machines to predict 12-month stock price growth of over 30%
- Evaluated the best-performing model to recommend a portfolio of multiple investments, optimized for maximum 12-month profitability on a $1,000,000 investment.

Electricity Trends: Weather Impacts, Clean Power Plan, and Method Comparison | *Python Bayesian Inference*

- Leveraged Bayesian inference, causal inference, and Two-Stage Least Squares (2SLS) to analyze relationships and account for confounders.
- Applied GLMs (Linear, Ridge, and Lasso Regression) to model linear relationships while managing multicollinearity and reducing overfitting.
- Applied Non-parametric models, including Support Vector Machines (SVR), Random Forest, and K-Nearest Neighbors (KNN), to capture complex, non-linear relationships between predictors and targets.
- Used advanced methods like **Gradient Boosting Regression** to optimize predictive accuracy and model performance.

EXPERIENCE

Business Developer Intern Jul 2020 - Aug 2022 | May 2024 - Aug 2024

WinJa Business Information Limited Company Tainan, Taiwan

- **Built an interactive map by using Google's Traveling Salesman Problem (TSP) API** that optimized the company's delivery routes, reducing the time drivers spend on route planning and ensuring the most efficient delivery routes.
- Acquired a 3-year contract order with Nissan Auto Corporation authorized dealer in Tainan.
- Obtained a contract for hundreds of computers and printers needed for MINMAX TECHNOLOGY CO.,LTD expansion.

Data Science Researcher (One of the six award winners among 110+ teams at the Spring 2024 Data Science Discovery Symposium). Jan 2024 - May 2024

Data Science Discovery Program Berkeley, CA

- Developed and implemented radial charts to visualize and analyze the biases of journalists and news sources. This involves identifying patterns and trends that reveal underlying biases in news reporting.
- Integrated Public Editor's data with platform user content data to uncover patterns of misinformation. Created tools and methodologies for analyzing how misinformation spreads across social networks.

Data Analyst & Consultant Aug 2023 - Dec 2023

Core Consulting Group (USC & Haas-Sponsored Student Consulting Organization) Berkeley, CA

- Used statistical methods and advanced analytics, data analysts uncover trends and correlations, while also defining and tracking key performance indicators (KPIs).
- Identified and sized market opportunities that projected a potential revenue increase of $2.9M+ for a tile company
- Developed and refined multiple personas based on demographic data and purchasing behaviors, which guided targeted marketing and product development strategies