Ray Wang

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Experience

Center for Naval Analyses (CNA) | Arlington, VA

Research Scientist / Economist | Nov 2023 – Present
Research Analyst / Economist | Jun 2020 – Oct 2022

- Modeled sailor re-enlistment decisions using 7 million+ panel observations, via conditional choice probability (CCP) estimation in R. Simulated policy impacts, visualized results, and provided recommendations to military leadership, affecting implementation of Navy's Detailing Marketplace Assignment Policy (DMAP) Phase I
- Within one year, learned legacy codebase and improved model fit, led project that extended Navy-specific codebase to work with Marine Corps data, and on-boarded and mentored incoming staff

CNA Field Representative to Carrier Strike Group (CSG) 12 | Oct 2022 – Nov 2023

- Directly supported Commander, CSG-12 with analysis on operational topics including electronic warfare tactics and optimizing flight operations for first-in-class aircraft carrier. Embarked on board USS *Gerald R. Ford* for Oct - Nov 2022 and May - Nov 2023 deployments
- Worked independently in a fast turnaround and technology-constrained environment. Conducted interviews with junior and senior sailors, collected and analyzed quantitative and qualitative data, and provided recommendations to leadership and action officers

DC Energy | Vienna, VA

Analyst | Sep 2012 – Oct 2013

- Analyzed electricity and steel/iron ore markets using R, proposed trades with 20% returns over 6 mos.
- Developed dashboards with PHP and R Shiny to visualize prices in support of daily trading

Education

PhD in Economics

University of North Carolina at Chapel Hill | 2014 - 2020

- Data visualization in R, data cleaning and program execution time optimization in Python

BS Eng. in Operations Research and Financial Engineering

Princeton University | 2008 - 2012

Technical Skills

- R, ggplot, data.table
- Python, pandas, scikit-learn, numba
- Dynamic discrete choice modeling, structural demand estimation, causal inference
- Machine learning (random forests), regression (linear, logistic), exploratory data analysis

Other

- Top Secret security clearance (Nov 2022 – Present), Secret security clearance (Jan 2021 – Nov 2022)
- Fluent in English and Chinese