

Haocheng (Edison) Gu

gu.649@osu.edu · 30 East Frambes, Apartment C1, Columbus, OH 43210 · 614-270-2477

EDUCATION

The Ohio State University | College of Arts and Sciences | Honors Program Columbus, OH
Department of Data Analytics | Bachelor of Science May 2021
Specialization: *Computational Analytics* with a focus on *Machine Intelligence* GPA: 3.7
Department of Mathematics | Bachelor of Science
Specialization: *Actuarial Science*

WORK EXPERIENCE

Data Modeling Intern | New York Life Insurance at New York, NY – Virtual May 2020-August 2020

- Debugged model merging conflicts by adapting the dynamic code fields to the updated input table structures
- Detected and resolved issues in Prophet tax reserve calculation by aggregating seriatim level outputs using SQL
- Staged *Pension Risk Transfer Valuation* and *Annuity and Guaranteed Products ALM* Models in Prophet Enterprise
- Assessed the impact of new asset assumptions by performing Cash Flow Testing prior to publishing to Production
- Streamlined the validation and sign-off process between model developers, data process owners, and metrics owners

Business Analytics Intern | Nationwide Insurance at Columbus, OH May 2019-April 2020

- Modernized reporting process using stored procedure in SQL, reduced days' worth of labor and increased accuracy
- Created dynamic Tableau exhibits to help the Appointed Actuary drilldown changes in sources of profits
- Performed Asset Adequacy Analysis on *Variable Universal Life* and *Universal Life* for reserve and capital solvency
- Ran deterministic and stochastic scenario models in MG-ALFA, projecting accumulated surplus over 30-40 years
- Collaborated with Modeling and Testing teams to configure variable calculations for regulatory Asset Adequacy work

Operational Data Analytics Intern | The Wexner Medical Center at Columbus, OH October 2018-April 2019

- Optimized and remodeled the Invoicing Database, reducing the number of queries needed from 15 to 4
- Streamlined invoicing of \$1,990,198 to 326 Advanced Practice Providers at OSU Physicians, Inc using Access Macros
- Budgeted the travel and training expenses for 149 cost centers based on positions, skill codes and FTE, totaling \$599,600
- Analyzed the average daily census data of nursing and ERU beds, reconciled the result with the Financial Board Report

Marketing Specialist | Positive Leadership Solution, LLC at Columbus, OH June 2018-August 2018

- Strategized social media presence of the company, outlined two new possible venues
- Reformulated company marketing strategy, targeting college generations with financial challenges
- Built company mock-up site highlighting product features using WordPress and Google Sites

LEADERSHIP AND PROJECTS

President | Actuarial Club at the Ohio State March 2019-Present

- Engineered a web-based solution for students and alumni's information storage, retrieval, aggregation and reporting using Google Sheets, SQL and Tableau, automating manual data processing and database maintenance at zero cost
- Provided leadership learning opportunities by arranging coffee chats with Chief Actuaries from 20 companies
- Founded an annual Virtual Run with The Big Ten's actuarial clubs and Gamma Iota Sigma chapters to form a tighter bond and promote a healthy lifestyle amidst the turbulence of 2020
- Mentored freshmen and sophomores in their exam studying strategies, guided them through actuarial job searching

Technical Projects

- **Java:** Built over 20 programs including interactive games, summary report generators, and file processors
- **R:** Performed data cleaning and analysis on datasets using GLM and PCA, visualized findings using ggplot and R Shiny
- **Python:** Optimized the training speed of a decision tree on 4 GB of text data, built RNN and CNN using TensorFlow
- **Website:** Created a website for my club with live reporting and interactive visualizations: <http://org.osu.edu/actuarial>
- Past and ongoing coding projects could be found on: <https://github.com/edisonghc>

SKILLS AND COURSES TAKEN

- **Proficient understanding:** R, Python (NumPy, Pandas, TensorFlow), SQL, Java, JavaScript, C, Tableau, Excel
- **Related courses:** Complete Data Science Bootcamp, Machine Learning Mastery, CSE 2123 (Data Structure), CSE 2331 (Algorithms), CSE 2421 (Systems), CSE 3241 (Database), CSE 3244 (Data Management in Cloud), CSE 3521 (Artificial Intelligence), CSE 5243 (Data Mining), CSE 5523 (Machine Learning), CSE 5526 (Neural Network), CSE 5544 (Data Visualization), ISE 3230 (Modeling and Optimization), STAT 4620 (Statistical Learning)