

# KENT GANG

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## EDUCATION

### University of Illinois at Urbana-Champaign

B.S. Engineering Physics with Honors

Concentration in Computational Physics, Mathematics Minor

Sep 2014 - Dec 2017

GPA 3.64/4.00

## WORK EXPERIENCE

### Quantitative Brokers

Software Engineer, Data Infrastructure and Analytics

Sep 2019 – Present

*Quantitative Brokers was founded by mathematician Robert Almgren, and offers algorithmic execution of commodities futures and cash treasury orders.*

- ◆ Created a reporting framework backend REST api web service for client algo performance with Python, Jupyter, PostgreSQL, PyQ, and Django.
- ◆ Reduced Transaction Cost Analysis (TCA) SQL and plotting time by half for client deliverables.

### Fannie Mae

Financial Economist I (Quant. Developer) – Capital Markets Analytics

June 2018 – April 2019

- ◆ Led the development of an automated Python application, CRTpy, for structured financial product modeling, duplicating INTEX functionality (cost of \$10k/person/month).
- ◆ Forecasted Mortgage Backed Securities (MBS) futures prices for an automated pricing engine with machine learning, Kalman filters, and linear states.
- ◆ Developed a decision tree model for the comparative evaluation of mortgage servicer performance, and other models such as logistic regressions for analyzing the likelihood of mortgage defaults.

Financial Engineer I – Capital Markets Analytics

June 2017 – June 2018

- ◆ Assessed quarterly returns on capital (ROC) for executive management using SQL queries to pull gigabytes of mortgage data from Oracle and Netezza databases.
- ◆ Modeled Credit Risk Transfer (CRT) transactions in Python with Pandas and NumPy, visualizing results with Matplotlib, Excel, or Tableau.
- ◆ Provided ad hoc analysis related to macroeconomic conditions or historical trends using Python, R, and Tableau.
- ◆ Developed and enhanced RShiny and Python web apps with HTML/CSS and unit test for logic.

## EXTRACURRICULAR ACTIVITIES

### Illinois Business Consulting

Consultant/Project Manager

Jan 2015 – Dec 2016

- ◆ Led and participated in fee-based consulting projects for fortune 500 companies and startups providing competitor analysis, market research, and strategy recommendations.
- ◆ Found import cost savings of tens of thousands of dollars a week by adjusting fee schedule.

## SKILLS

Python | Pandas | NumPy | Matplotlib | Scikit-Learn | Jupyter | Django  
SQL | Bash/Linux | HTML/CSS/JavaScript | R