

# 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

Dec 2017

GPA 3.64/4.00

## WORK EXPERIENCE

### Fannie Mae

Financial Economist I – 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).
- ◆ Developed interactive Tableau dashboards computing Conditional Prepayment Rates (CPR) and other data related to Mortgage Backed Securities (MBS), Mega pools, and Servicers.
- ◆ Designed backend databases for the monitoring of CPR time series and mortgage performance.
- ◆ Forecasted Mortgage Backed Securities (MBS) futures prices for an automated trading platform and created other models with techniques such as logistic regression, decision trees, k-means clustering, and random forests.

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 Excel Pivot tables, Python, and Tableau.
- ◆ Developed and enhanced RShiny and Python Flask web apps with HTML/CSS and unit test for logic.

## RESEARCH EXPERIENCE

### Kwiat Quantum Information Group

Undergraduate Research Assistant

Sep 2014 – Nov 2015

- ◆ Programmed image alignment software in MatLab for noisy data transfer experiment.
- ◆ Studied characteristics of a fiber optic cable fusion splicer.
- ◆ Assisted with the polishing of fiber optic cables, laser alignment, and other preparations.

## EXTRACURRICULAR ACTIVITIES

### Illinois Business Consulting

Consultant/Project Manager

Jan 2015 – Dec 2016

- ◆ Led and participated in fee-based consulting projects for two fortune 500 companies and two startups related to food market entry, biomedical technology, and supply chain logistics.
- ◆ Provided competitor analysis, market research, and strategy recommendations.

## SKILLS

Python | Pandas | NumPy | Matplotlib | Scikit-Learn | Flask  
Tableau | R | SQL | SAS | VBA/Excel | Bash/Linux | HTML/CSS/JavaScript