KENT GANG

kent.y.gang@gmail.com | 847-668-4426 | kgang.github.io

EDUCATION

University of Illinois at Urbana-Champaign   December 2017
B.S. Engineering Physics Major – Computational Physics Concentration   GPA 3.64/4.00
Mathematics Minor

WORK EXPERIENCE

Fannie Mae   June 2017 – April 2019
Financial Economist I

- Model Credit Risk Transfer (CRT) transactions in Python, accounting for deal terms such as maturity, delinquency and prepayment triggers, interest rate spreads, and sizing. Develop and maintain software for deal modeling, CRTpy, supplementing INTEX (cost of $10k/person/month licenses).
- Maintain and develop Tableau dashboards computing Conditional Prepayment Rates (CPR) for Mortgage Backed Securities (MBS), Mega pools, and Servicers.
- Provide ad hoc analysis related to macroeconomic conditions or historical trends at behest of other divisions and the conservator, FHFA.
- Price one-off bulk deal mortgage transactions with banks and other dealers.
- Interface with and review others' work in SQL, R and SAS. Analyze datasets with hundreds of thousands to millions of observations.
- Mentor others in Python including writing lessons on object-oriented programming and decorators. Participate in training related to machine learning, artificial intelligence, and modeling.

RESEARCH EXPERIENCE

Kwiat Quantum Information Group   September 2014 – November 2015
Undergraduate Research Assistant

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

Fe, Co, Ni Adatoms Adsorbed on Silicene: A DFT Study   September 2012 – September 2013
Primary Author

- Studied electromagnetic properties of silicene using *Quantum Espresso*, a computational tool implementing Density Functional Theory (DFT).
- http://digitalcommons.imsa.edu/cgi/viewcontent.cgi?article=1008&context=student_pr

SKILLSETS

Python   Pandas |NumPy | MatPlotLib | Scikit-Learn | Flask/Django
Other   R | Tableau | SQL | SAS | VBA (Excel) | Bash/Linux |ML/AI | HTML/CSS