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George Kim

Software Engineer

Education

University of Chicago

B.S. Candidate in **Mathematics, Computer Science and Statistics**

Anticipated Graduation: **June 2022**

GPA/CS/Math/Stat: **3.85/3.96/3.87/3.85**

Graduate Courses

Statistical Theory I (in-progress)

Undergrad Courses

Computer Systems
Discrete Mathematics
Theory of Algorithms
Data Structures & Algos. in C
Data Structures & Algos. in Scheme
Statistical Models & Methods
Mathematical Probability
Accelerated Real Analysis I-II-III
Abstract Linear Algebra
Abstract Algebra I (in-progress)
Complex Analysis I (in-progress)
Economic Theory and Analysis I-II

Awards

- **Jane Street Estimathon Winner** (Highest U.S. College Score)
- **Dean's List '18-'20** (Top 20% GPA in all applicable years)
- **Urbanek Scholar** ($2,500/year)

Skills

• C • Python • Java • Scheme • Haskell
• Ruby on Rails • R • LaTeX• Git • Linux

Organizations

ILC: Technology | Team Manager
- Lead developer, project manager on data acquisition, handling tasks

Maroon Capital | Quant Analyst
- Quant trading projects, education

Phoenix Funds | Finance Analyst
- Gave debriefings on financial markets, wrote buy/sell reports

Experience

Nutrisense | Data Science Intern | Ruby on Rails, React Native, SQL Remote
June 2020 - August 2020
- Implemented clinic-approved glycemic variability statistics using theoretical time-series optimization algorithms published in academic PMC papers
- Integrated user-friendly statistics dashboard with interactive graphical visualizations (i.e. highlighting data/areas on the CGM graphs used in algorithms)
- Formulated data standardization algorithm (bootstrapping previous data, cleaning noisy data with rolling mean filter) to recalibrate resting BG for new sensors

UChicago Mathematics REU | Undergraduate Researcher Chicago, IL
June 2019 - August 2019
- **Published an academic paper** (peer-reviewed by Peter May, view on UChicago Mathematics REU 2019 site) on computability theory, focusing on the bijection between automata and formal languages known as the Chomsky Hierarchy
- Studied graduate-level topics in dynamical systems, graph theory, and topology

Swapp | Lead Software Engineer Intern | Python, React, SQL Chicago, IL
April 2019 - August 2019
- Coordinated programming tasks to 4 junior developers via agile development methods; directly corresponded with CEO to set sprint deadlines, objectives
- On website, integrated Stripe Checkout, CRM affiliate/referral program, Google analytics/KPI trackers and funnel visualization software on social media platforms
- On web app, converted UI/UX designs to React components, integrated EventBrite into Swapp API, managed database using Django, PostgreSQL

Projects

Choker | C, Java, JavaFX (in-progress)
- Choker (Chess+Poker) app using bit manipulation for speedy calculations
- Implemented bitboards for game state representation and rotated, magic bitboards, sliding bit mask techniques for chess move generation
- Utilized Java inheritance structure for deck and hand representation for poker
- Integrating speedy C code for chess into Java using JNI, utilizing JavaFX for GUI

RideVide | Python, BeautifulSoup, Django
- Project lead on RideVide, ILC:T's web application to help UChicago students coordinate Uber rides to and from airports around school breaks
- Built a Python web scraper to obtain real-time ETAs, airport from a flight number
- Implemented grouping algorithm using metric weighted by airport, campus location, number of large baggage, personal flexibility

Twitter Trader | Python, nltk, tweepy
- Trading bot inspired by JP Morgan's "Volfefe" index, which measures the impact of Donald Trump's tweets on market volatility.
- Conducted sentiment analysis on Trump tweets: constructed polarity lexicon using perceptron tagger, basing tags on correlation between tweet timing and subsequent SPY movement; constructed salience lexicon of tf-idf scores
- Classified new Trump tweets with Naive Bayes classifier (trained using polarity-salience products) and made market orders accordingly