Hye Woong Jeon

hwjeon@uchicago.edu |(+1) 6096199577 | alikiki.github.io

EDUCATION

University of Chicago *Chicago, IL*
Bachelor of Science in Mathematics & Statistics *Expected graduation: June 2023*
Cumulative GPA: 3.917/4.0
Major GPA: 3.94
Relevant Coursework: Statistical Theory and Methods I-II, Introduction to Computer Science I-II, Stochastic Processes

Financial Markets Program (formerly, UCIB: FM)
● Accepted into a selective three-year program focused on building business acumen for quantitative roles in the financial markets through weekly workshops, and curriculum at the Booth School of Business

The Hotchkiss School *Lakeville, CT*
Cumulative GPA: 3.8/4.0 *August 2013 - May 2017*

EXPERIENCE

3DL | Chicago, IL *September 2021 - Present*
Deep Learning Researcher
● Modified generative image synthesis idea to create a novel graph synthesis solution
● Implemented data generation algorithm for meshes that satisfy various conditions such as resolution
● Presented computer vision and 3D deep learning academic papers to a weekly reading group

Cochlear.ai | Seoul, South Korea *June 2021 - August 2021*
Software Engineering Intern
● Developed database architecture and distribution methods for government's cloud-worker sound labeling project
● Constructed editing tool for modifying sound ontology hierarchies with custom-made Python packages
● Designed highly interactive ontology GUI using Python, Flask, and Cytoscape JS
● Collaborated with database managers and cloud-workers to create frictionless experience for audio segmentation

University of Chicago Mathematics REU | Chicago, IL *June 2021 - August 2021*
Researcher
● Authored a self-contained exposition that explores Benoit B. Mandelbrot's Multifractal Model of Asset Returns
● Studied fractal dimension and scaling behavior in random processes such as Fractional Brownian Motion
● Explored several definitions of fractal dimension such as Hausdorff dimension or Minkowski dimension
● Investigated and implemented methods of creating multifractal measures and processes using Python

United Nations Interim Force in Lebanon | Tyre, Lebanon *April 2019 - December 2019*
Sergeant, Squad Leader
● Interpreted for the Republic of Korea Battalion in Joint Training Exercises with more than 15 participating contingents
● Received the UN Peacekeeping Medal from UNIFIL Headquarters and the Peacekeeping Badge from Joint Chiefs of Staff
● Created an automated system that streamlined Recreational Leave document creation, reducing effort by over 20 hours

SELECTED PROJECTS

Audio Fingerprinting *(Shazam reconstruction)* *November 2020 - January 2021*
● Designed tools for preparing audio files for fingerprinting protocols, and methods for identifying by file or by microphone
● Developed a user-friendly command-line interface, capable of both fingerprinting and identifying songs
● Used binary morphology to sharpen spectrogram images and identify frequency peaks for constellation mapping
● Constructed an SQL database to manage audio files and audio fingerprint data to identify fingerprints quickly

Scheduling Algorithm *March 2020 - April 2020*
● Utilized simulated annealing (SA) to automate the search for the fairest possible watch duty schedule
● Experimented with energy-state changing methods to determine suitability for optimal performance in SA algorithm
● Implemented a genetic algorithm that encodes schedules to compare against SA's speed and performance results

Cryptography Implementations *January 2019 - April 2019*
● Created ElGamal and RSA encryption and decryption implementations using Mathematica and Python
● Programmed essential number theory algorithms such as the fast-powering algorithm and the Miller-Rabin primality test

SKILLS & INTERESTS

Skills & Languages: Python, R, SQL, Javascript, Microsoft Office; English, Korean
Interests: Creatures (game), close-up magic, cello, poker, music visualization, philosophy, Formula One Racing