# SHUMIN AN

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https://coconut00.github.io

## EDUCATION

**Beijing Jiaotong University, Beijing** *Sept. 2016 - June. 2020*
BSc in Computer Science Overall GPA: 3.65
Core Courses: Data Structure, Algorithm, Operating System, Probability Theory and Mathematical Statistics, Linear Algebra, Discrete Math

**New York University, NYC** *Jan. 2021 - Present*
MSc in Computer Engineering Overall GPA: 3.8
Core Courses: Internet Architecture & Protocols, Data Center and Cloud Computing, Computing Systems Architecture

## PROJECTS

**Analysis of Early-Exit Neural Network** *Mar. 2019 - June. 2019*
*Supervised by Prof. Hongzhi Zhao*

- Analyzed the feasibility and performance of Early-Exit CNN for reducing the computational cost during image classification inference. Developed tools for showing the memory cost, FLOPs and training time of each layer.
- Proposed method of placing network exits based on the percentage of FLOPs cost, which helps reduce the inference cost and preserve the accuracy compared with BranchyNet.

**Real-time Visualization of Urban Planning** *Jun. 2018 - Dec. 2018*
*Supervised by Prof. Shuang Ren*

- Implemented the visualization framework that discovers regions of different functions, such as educational areas and business districts, in a city using both human mobility among regions and points of interests located in a region.
- Analyzed the features given by the combination of different functions in each region, like human consuming patterns, traffic condition, etc .

**User Portrait from E-commerce Website** *Oct. 2017 - Dec. 2017*
*Supervised by Prof. Shuang Ren*

- Implemented multi-thread web crawler for mining data on e-commerce website, including information of products and users.
- Analyzed the characteristic of website users based on k-means algorithm.

## WORK EXPERIENCE

**YearOne Investment, Beijing** *May. 2018 - Present*
*Quant Researcher*

- Developed CTA and Marketing Timing strategies for Index Futures, Options and Commodity Futures.
- Developed tools computing implied-volatility for callput options based on Black-Scholes Model, used interpolation method for analyzing and showing the severity of volatility deviation and practiced arbitrage.

- Used Monte Carlo method to simulate the performance of trading strategies, generated confidence level and tail risk based on the simulation, provided evaluation on feasibility of portfolio optimization.

## AWARDS

- The Scholarship of Beijing Jiaotong University *2016-2020*