JUNHONG (JUHO) YE

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EDUCATION

University of Illinois Urbana-Champaign, Grainger College of Engineering August 2022-May 2024
Master of Science in Materials Science and Engineering

- Core Courses: Database System, Data Visualization, Applied Parallel Programming, System Programming, Computer Architecture, Aritficial Intelligence, Materials Informatics, Digital Materials Introduction

Sun Yat-sen University, School of Materials Science and Engineering September 2016-June 2020
Bachelor of Engineering in Macromolecular Materials and Engineering

- Core Courses: Polymer Physics, Polymer Chemistry, Computational Materials Science, Nanomaterials

PROJECTS

SAVELIVE-Affordable & Save Rent in Los Angeles Champaign, U. S.
Course Project of CS 411 Database Systems June 2023-August 2023

- Developed an SQL database for efficient query operations, facilitating users to efficiently search the appropriate housing based on price and local crime rates in LA
- Implemented frontend using Javascript and HTML; features include account login, menu, map, keyword search, rent & crime details, and favorite listings
- Designed backend operations such as crime rate retrieval, rent information fetch, and geospatial filters to prevent close-proximity housing duplication
- Integrated LA's rent database (16.4k rows, 12 columns) with its crime database (318k rows, 28 columns)

Narrative Visualization of Chinese Economic History Champaign, U. S.
Course Project of CS 416 Data Visualization June 2023-August 2023

- Developed dynamic line charts with Chart.js to illustrate trends in China's economic history and highlight key incidents impacting its economy
- Integrated interactive features: selectable bars, annotations, story buttons, images, and text
- Backend supports data filtering based on year ranges, and timeline shifts with button interactions
- Visualized China's GDP, per capita GDP, and annual GDP changes from 1961 to 2022

GPU Convolution Kernel Optimizations Champaign, U. S.
Course Project of ECE 408 Applied Parallel Programming November 2022-December 2022

- Experimented with optimization strategies like Tiled Shared Memory Convolution, Shared memory matrix multiplication, and Kernel fusion techniques, for optimizing forward Kernel convolution
- Achieved a 66% reduction in the operation time for the Convolution Kernel

WORK EXPERIENCE

Bank of China Guangzhou, China
Software Engineer Intern July 2018

- Developed and optimized the Android payment app "Gathering Wealth" enabling QR code-based payments for retailers
- Implemented an account-to-debit card linking system for direct retailer payments
- Scaled user bases from 3k to over 15k, reduced launch time of this app by 50%

SKILLS

- C++ (Online dataset analysis, CUDA, advanced)
- Python (Jupyter Notebook, numpy, PyElastica, pandas, advanced)
- JavaScript & TypeScript (React.js, Frontend and backend implementataion, advanced)
- CSS & Html (Building frontend and modifying the visualization on webpage, advanced)
- SQL (Data analysis and filtering, advanced)
- GCP & AWS (Website deployment, advanced)