Sijie Wang

siw019@ucsd.edu | [GitHub] | [LinkedIn] | 1(619)560-9935 | San Diego, CA

EDUCATION

University of California, San Diego   La Jolla, CA
M.S. in Computer Science (3.77/4.0)   09/2021 - 12/2022
B.S. in Computer Science (3.81/4.0)   09/2019 - 06/2021
- **Honor**: Cum Laude
- **Coursework:** Design & Analysis of Algorithm, Operating Systems (C++, Java), Computer Networks (C), Distributed Systems, Database Systems, Data Analytics (PySpark), Parallel Computation (C++), Compiler Design (TypeScript), Computer Security

EXPERIENCE

TigerGraph, San Diego, California - Software Engineer Intern   06/2022 - 09/2022
- Refactored serialized Query Plan for Interpret Mode, the size of the generated JSON files during interpreting is reduced by 1/3 without behavior changes
- Reformatted Primary ID based on customer requirements
- Fixed type check error and dealt with GPE crash when using negative clauses in Type Check & Code Gen part

Villanova University, Villanova, Pennsylvania - Research Assistant   07/2019 - 09/2019
- Engaged in a research project conducted by Prof. Xun Jiao, which uses machine learning to predict the dynamic delay of voltage-scaled circuits
- Assisted to design and train DeVos, a supervised learning model that can predict dynamic delay of voltage-scaled circuits based on their input workload
- Across a wide range of voltage levels, DeVos can achieve on average a mean absolute percentage error (MAPE) of less than 5%

PROJECT

Sandboxing Python-wrapped C libraries with RLBox [GitHub]
- Used RLBox API to sandbox, along with the Ctypes Python library to pass data from Python to C/C++
- Sandboxed various functions from a toy C library, calling the sandboxed functions from Python, and basic neural network C library functionality, and invoke it from Python
- Utilized clang & WASM2C to compile library C code to WebAssembly and back to C

Task Manager [GitHub]
- Developed a NodeJS REST API using Express and connected it to a MongoDB database via Mongoose
- Set up email notification for user opening/canceling account using SendGrid and deployed the API to Herokudata
- Smoke tested the app using Postman and wrote automated HTTP unit tests with Jest & SuperTest

Pomodoro-Timer App [GitHub]
- Implemented Task-list and timer to enhance user's productivity by focusing on a task within specific timeframe
- Utilized GitHub actions for CI/CD and Git as version control throughout the software development lifecycle
- Optimized user interaction with JavaScript, CSS and HTML

PAPER

Towards an Optimization Perspective for Bandits Problem [Paper]
- Studied the multi-armed bandit problem from an optimization perspective
- Implemented two online optimization frameworks for optimization problem (OP), including follow-the-regularized-leader (FTRL) and online minor descent (OMD)
- Conducted numerical experiments to show that OP-based approach outperforms upper confidence bound which is designed from a frequentist-statistical perspective

SKILLS

Programming Language:	C, C++, Java, Python, Javascript, Shell, SQL
Tech Stack:	MySQL, Spring, Kafka, HTML, CSS, NodeJS, Spark, Vue, React
Teamwork Tools:	Git, CI/CD, Jira, Patience to Communicate