Fan(Allen) Zang

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EDUCATION

University of Illinois Urbana-Champaign   Champaign, IL
BS,Major in Mathematics & Computer Science   *08/2018-06/2022*
MCS,Professional Master of Computer Science   *08/2022-12/2023*
Teaching Assistant*, Course: Numerical Analysis*   *08/2022-05/2023*

SKILLS

- **Programming**: C/C++, C#, .Net Framework, Java, Kotlin, Python,Node.js, Javascript, HTML,CSS, React
- **Tools**: SQL,MongoDB, DynamoDB, PyTorch, Postman, AWS Lambda, Amazon S3, XML, JSON Git, UE4

EXPERIENCE

ASM International (asminternational.org)   Phoenix, Arizona
Software Engineer (full-time)   *01/2024-present*
- Work in the development of a **.Net Framework** Application for Common Software Architecture (CSA) that control all ASM-manufactured wafer transferring and processing equipment.
- Spearhead the design, development, and testing of a high-performance **MySQL** database that efficiently handles over **10 million** real-time **PLC** input/output signals per minute from device drivers.
- Collaborate with hardware engineer to gather data storage requirement. Design the **ER diagram** and optimize the schema through normalization. Develop unit testing to ensure data accuracy and consistency.
- Developed the **Database Administration** system that include space-efficient data archiving, automated backup & cleaning, and performance analysis tool to manage database health.
- Contribute to the development of CSA installer using **WiX**, automating the MySQL installation & upgrade.

Amazon Web Service (aws.amazon.com)   Seattle,Washington
Software Dev Engineer (full-time summer intern)   *05/2023-08/2023*
- Realize the integration between two AWS products: **IoT Device Advisor** (IDA) & **IoT Device Tester** (IDT)
- Develop a downloadable client software using IDT Builder SDK that communicates with IDA using **MQTT** and connect to IoT device using **SSH**. This integration elevates the role of IDA **beyond mere behavioral test** and increases test capability of existing IoT qualification test suites by enabling device system control & enhancing device status visibility, resulting in a **45%** reduction in customers' service running time
- Design the distribution architecture of client software deployment using **Amazon CloudFront** and **S3**
- Lead the **problem scoping** and solution design. Actively and effectively collaborate with both teams, participate in all daily scrums, and make valuable contributions to **sprint planning**.

NetEase Games (neteasegames.com)   Hangzhou, China
Game Engine Developer (full-time summer intern)   *07/2021-08/2021*
- On the basis of the open-source navigation mesh tool set "**Recast & Detour**", develop an optimized engine for game path-finding on 3D map of large MMORPG game
- Implement the hierarchical-approach with **A*** Path finding algorithm to dynamically load map information
- Compared to the original engine, initial memory consumption are **10 times smaller** on average, while losing little accuracy nor adding little computation time

RootLo (rootlo.com)   Champaign, IL
Application Developer (part-time intern)   *03/2021-08/2021*
- RootLo is a mobile app which enables users to stay connected with colleagues, share tips and take advantage of their location independence. Work in the development of the **integration app** between Slack and RootLo; proactively collaborate with product manager to ensure the propel of app deployment
- Implement **Microsoft Bot Framework** to develop a chat bot which introduce core features to new users and successfully **collects feedback from 90% of existing users**, facilitating continuous improvement. Also use API to provide **location-based services** like weather broadcasting for users.