Wen-Hsing Huang

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WORK EXPERIENCE

Amazon   09/2024 - Present
Software Dev Engineer | Business Payment   *Seattle, WA*
- Contributed to **25%** customer payment friction reduction and **$100M+** spent unblocking Account Payable Automation project.
- Enhanced B2B payment UX by implementing client-side payment amount validation using **React.js** and **Redux**.
- Engineered feature migration and resource fetching using A/B test gated **Java Spring** controllers.
- Secured production readiness by conducting Amazon Security Review and implementing **CloudWatch** metric alarms for APIs.
- Reduced APIs latency **70%+** by implementing **concurrent multithreading** with rate limiter to comply with downstream TPS SLA.
- Onboarded to oncall production support within first quarter, ensuring service availability.

ASM America   02/2024 - 09/2024
Software Engineer II   *Phoenix, AZ*
- Engineered hotfixes and features for semiconductor manufacturing equipment software using **C#** and **C++**.
- Collaborated with cross-functional teams to resolve urgent first-line issues, ensuring product availability.
- Served as primary contact for resolving immediate software issues on specific equipment, minimizing production downtime.

Microsoft   07/2021 - 01/2022
Program Manager Intern | BingAds   *Taipei, Taiwan*
- Developed end-to-end monitoring dashboard for Microsoft Audience Network, tracking pricing strategies performance, video ads demand, market pricing competitiveness, and global availability.
- Built and optimized data pipelines by adjusting query formulation with **COSMOS**, **Azure Data Explorer**, **SCOPE**, and **C#**.
- Leveraged **Power BI** to analyze big data and design visualizations for data insights.
- Performed ad-hoc analysis of production alerts, synthesized data into actionable summaries for developers for problem resolution.
- Evaluated metric effectiveness for image stock keyword recommendations by data analytic.
- Redesigned sales promotion tactic template schema and established database connectivity.

PROJECTS

Convolution parallel computing optimization of CNN (CS 483 Applied Parallel Programming)
- Profiled and addressed performance bottlenecks with **Nsight Compute** & **Nsight Systems**.
- Optimized parallel convolution algorithm with **CUDA C++**, achieving a 53% performance increase over the baseline using tiled shared memory, loop unrolling, FP16 arithmetic, and Streams.

Distributed Machine Learning Inference System (CS 425 Distributed Systems)
- Developed a high-performance distributed system using **Python** and **socket programming** over **TCP** and **UDP** protocols, integrating failure detection, membership management, file system operations, and job scheduling for optimal efficiency.
- Incorporated SWIM-style failure detection and ring-based membership for enhanced availability and fault tolerance.
- Devised an efficient job scheduling algorithm to balance processing time, ensuring a maximum 20% variance between batches.

EDUCATION

University of Illinois Urbana-Champaign   08/2022 - 12/2023
Master of Computer Science   *Champaign, IL*
- **GPA**: 3.81 / 4.0

National Central University   09/2018 - 06/2022
Bachelor of Science in Computer Science and Information Engineering   *Taoyuan, Taiwan*
- **GPA**: 3.98 / 4.0, **Rank in Dept.**: 1st / 101

SKILLS

Programming Languages: Python, Javascript, C/C++, Java, C#, SQL, Matlab, HTML/CSS, Assembly, VHDL, LaTeX

Tools & Frameworks: Git, GCP, AWS, CUDA, Nsight Compute, Nsight Systems, Java Spring, React.js, Node.js, MySQL, MongoDB, Neo4j, Power BI, Android

Languages: English (Fluent), Mandarin (Native)