Wen-Hsing Huang

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WORK EXPERIENCE

Amazon   09/2024 - Present
Software Dev Engineer | Business Payment   Seattle, WA

Account Payable (AP) Automation Onboarding Process Enhancement and Backfill
- Boosted projected annual customer feature adoption by **100k+** by designing, implementing, testing, and deploying React.js onboarding process enhancement and an **AWS**-powered backfill pipeline with **S3, SQS, Lambda, CloudWatch**.

AP Automation API Optimization and Stability
- Optimized API performance and stability by implementing **concurrent** processing with rate limiter to meet upstream TPS SLA
- Reduced latency by **45-65%** (avg) and **60-68%** (P90/P99), cutting API response variance by **80-99%**, lowering operational tickets by **20%**, and eliminating **600+** projected annual latency alarms globally.

AP Automation Self-Service Project | **25%** customer payment friction reduction and **$100M+** spent unblocking
- Enhanced B2B payment UX by implementing client-side payment amount validation using **React.js** and **Redux**.
- Engineered feature migration and financial data fetching using A/B test gated **Java Spring** controllers.
- Secured production readiness by conducting Amazon Security Review and implementing **CloudWatch** metric alarms for APIs.
- 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 with **COSMOS**, **Azure Data Explorer**, **SCOPE**, and **C#**.
- Leveraged **Power BI** to analyze daily **PB+** data and design visualizations for actionable data insights.
- Evaluated algorithm 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)
- Increased parallel convolution algorithm performance by **53%** over baseline using **CUDA C++** by profiling bottlenecks with **Nsight Compute/Systems** and implementing optimizations including tiled shared memory, loop unrolling, FP16 arithmetic, and Streams.

Distributed Machine Learning Inference System (CS 425 Distributed Systems)
- Developed a high-performance distributed system in **Python** using **socket programming** over **TCP/UDP**, integrating SWIM-style failure detection, ring-based membership, and job scheduling algorithm to maintain processing time variance within 20%.

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
Extra Tools & Frameworks: Git, GCP, AWS, CUDA, Nsight Compute, Nsight Systems, Node.js, MySQL, MongoDB, Neo4j, Android
Languages: English (Fluent), Mandarin (Native)