

# Kevin Wang

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## WORK EXPERIENCE

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### Microsoft

New York, NY

Software Engineer II

June 2022 – Present

- Designing and developing software for Commerce Cloud Charge Generation and Billing Platform, Microsoft's highest scaling and most business-critical distributed systems, which processes 1+ billion transactions per day and \$6+ billion per month with a focus on extreme data accuracy, resilience, throughput optimization, and low latency of commerce flows.
- Ownership of multiple services responsible for aggregating and orchestrating the flow of charge generation for all Azure customers, usages, capping Azure trial subscriptions, and reprocessing ratings and invoices for enterprise customers.
- Architect in designing new services for commerce rating and rerating pipelines. Lead cross-team efforts in architecture design to enable customer flows such as plan changes, negotiated discounts, invoice calculation and charge result synchronization.
- Analyze, design, and execute hotfixes to resolve any outages or issues in production clouds as on-call engineer. Coordinate among on-call engineers from multiple teams to perform root cause analysis after outages and implement permanent solutions.

### Amazon

Palo Alto, CA

Software Development Engineer Intern, Search Engine Technologies

May 2021 – August 2021

- Leveraged AWS services to create a Republisher that can spin up parallel instances to reach a throughput per second (TPS) of up to 60k and is able to process 1+ billion product identifiers, or ASINs, in a single workflow.
- The Republisher is a software application that aggregates data and makes products searchable on amazon.com by automatically republishing ASINs that are out-of-sync or updating ASINs after large systematic changes.
- Developed in TypeScript, Java, and Python, and used AWS services including DynamoDB, CDK, Glue, EC2, Lambda and S3.

### SpaceX

Los Angeles, CA

Software and EMI Avionics Intern

January 2021 – April 2021

- Designed, implemented, and tested the full end-to-end production EMC process for in-house pre-compliance testing. Upgraded hardware and software processes for automation of data collection and analysis for all Starlink Product EMC testing.
- Created a software system focused primarily on consumer pre-compliance testing analogous to the F9/Dragon/Starship EMC qualification workflow. Developed primarily in Python.

### Gentex Corporation

Ann Arbor, MI

Software and Electromagnetic Compatibility Intern

May 2019 – August 2020

- Designed and developed a software system consisting of a C++ backend and Qt frontend for automation of EMC test procedures.
- Devised a log(n) complexity algorithm to efficiently reach maximum boundaries on tests without straying beyond set error thresholds.

## PROJECT EXPERIENCE

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### Scrabble Score Maximization

<https://github.com/kwwangkw/scrabble-solver>

- Developed a scrabble score maximization software project that performs score maximization from image input using corner keypoint warping and neural network letter recognition alongside a maximization algorithm.

### Loop Fusion Compiler Pre-Pass

<http://github.com/kwwangkw/loopfusion-prepass>

- Developed novel loop fusion compiler constraint loosening pass focused on intervening code movement and bound conforming, allowing for greater percentage of loop fuses to occur through LLVM compiler loop-fusion.

### SpotifyMixer Web Application

<https://github.com/kwwangkw/spotify-mixer>

- Created a web app that automatically generates personalized playlists for you and your friends full of everyone's favorite songs using data from Spotify Web API with 500+ daily users. GatsbyJS, HTML5, CSS, and Firebase.

## EDUCATION

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### University of Michigan

Ann Arbor, MI

Computer Engineering; Bachelor of Science in Engineering, College of Engineering

May 2022

## ADDITIONAL

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**Technical Skills:** C#, C++, C, Python, KQL, SQL, Azure, AWS, Cosmos, Scope, HTML/CSS, JavaScript, Git