

Kevin Wang

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EDUCATION

University of Michigan

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

Ann Arbor, MI

May 2022

SKILLS

Technical Skills: C++, C, C#, Java, Python, KQL, SQL, Azure, AWS, Cosmos, Scope, HTML/CSS, JavaScript, VBA, Altium, Verilog, Git, Agile.

PROFESSIONAL EXPERIENCE

Microsoft

Software Engineer II

New York, NY

June 2022 - Present

- Designing, developing, and testing mission critical software for Commerce Cloud Rating Platform – Azure Big Data Processing, Microsoft's highest scaling and most business critical distributed systems which receive 300M+ transactions per day.
- Ownership of services responsible for aggregating and outputting transaction ratings for all Azure usages, capping Azure trial subscriptions, and reprocessing ratings and invoices for enterprise customers.
- Architect in designing new services for the commerce rating and rerating pipelines. Construct design documents based on project requirements while coordinating with upstream and partner teams to review solutions and constraints.
- 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

Software Development Engineer Intern, Search Engine Technologies

Palo Alto, CA

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

Software and EMI Avionics Intern

Greater Los Angeles, CA

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

Software Intern, Electromagnetic Compatibility Intern

Zeeland, MI

May 2019 - August 2019; May 2020 - 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.
- Simulated electromagnetic performance of 150+ designs to provide recommendations on altering existing designs to achieve best results.

University of Michigan College of Engineering

EECS 493 and ENTR 407 Teaching Assistant

Ann Arbor, MI

August 2021 - Present

- Facilitated weekly flipped-classroom discussions, held office hours, graded student work, wrote problem sets, and provided feedback on graded class material for User Interface Development and Entrepreneurship Hour courses.

PROJECT EXPERIENCE

Scrabble Score Maximization

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.
- Motivation is to provide a helper tool for playing Scrabble – a common English word-based board game. The idea is to allow a user to easily upload a photograph of their board and current tiles in hand and immediately be able to receive the highest possible scoring move they could make.

Loop Fusion Compiler Pre-Pass

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.
- Wrote research paper on the implementation of this loosening pass describing how to collect sets of control flow equivalent loops and test whether they can be fused.

SpotifyMixer Web Application

spotifymixer.com

- Utilized GatsbyJS, HTML5, CSS, and Firebase to create 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. SpotifyMixer has 500+ daily users.

Miniature Tether Electrodynamics Experiment (MiTEE) Research

Research Assistant

- Conduct research into novel propulsion technology using propellant-less propulsion through electrodynamic tethers for nano-spacecraft.
- Create PCBs using Altium for solar interconnect and antenna matching boards as part of the Electrical Power Systems Research Team.

Personal Website

kevinjwang.com

- Designed and created a personal webpage using HTML/CSS/React technologies.