

Kevin Chen

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EXPERIENCE

Amazon	Seattle, WA
<i>Software Development Engineer</i>	<i>April 2024 - Present</i>
<ul style="list-style-type: none">Migrated Kindle Search service to AWS, integrating GraphQL gateway, containerization via AWS ECS, and asynchronous service dependencies using Kotlin coroutinesDesigned and implemented LLM-powered natural language search for Kindle using AWS Bedrock (Anthropic Claude), including intent classification and integration with production search servicesOwned development of the Interactive Refinement Bar and Android filter architecture, driving +540 TPS filter usage and +87K additional subscription borrows/month (~\$794K annualized impact)Led migration of Kindle Search Android UI to Jetpack Compose, reducing UI codebase by 54%, improving accessibility compliance and establishing reusable UI patterns across the organizationContributed to Kindle Search service modernization, implemented notification service migration, resolved 20+ accessibility issues, mentored new hires and completed 500+ code reviews across 5 services	
<i>Software Development Engineer Intern</i>	<i>May 2023 - July 2023</i>
<ul style="list-style-type: none">Implemented the Kindle Search mobile UI using ReactJS, contributing to cross-platform UI modernization	
<i>Software Development Engineer Intern</i>	<i>May 2022 - August 2022</i>
<ul style="list-style-type: none">Designed and implemented a data pipeline using DynamoDB, EventBridge, SQS, S3 and Lambda to ingest customer search metrics and generate daily keyword trend reports	

EDUCATION

University of Illinois Urbana-Champaign	GPA: 4.0
<i>Master of Computer Science (Online)</i>	<i>May 2024 - Present</i>
University of Illinois Urbana-Champaign	GPA: 4.0
<i>Bachelor of Science, Computer Science + Linguistics</i>	<i>August 2020 - May 2023</i>
<ul style="list-style-type: none">Activities: Computer Systems course assistant, Software Design Studio course assistant, ETRL computer vision research assistant, Leetcode @ UIUC student organization presidentAwards: UIUC Bronze Tablet (Top 3%) Graduate, Dean's List, 2023 Outstanding Undergraduate Student	

PROJECTS

Heterogeneous-Resource-Aware Federated Learning with Intelligent LoRA Allocation and Aggregation	
<ul style="list-style-type: none">Proposed HRALoRA, a dynamic LoRA rank estimation and allocation algorithm for decentralized machine learning under heterogeneous client resource constraintsCo-author of research paper submitted to CCGRID 2026	
Smarter Suggestions - Rethinking Reformulation and Related Searches with AI	
<ul style="list-style-type: none">Kindle AI Hackathon Winner (2025): LLM-generated dynamic query reformulation and related searches	
TOL-Trainer	
<ul style="list-style-type: none">Built online grading platform commissioned by National Taiwan University for the Linguistics Olympiad	

SKILLS

Languages: Java, Kotlin, C++, Python, TypeScript, SQL, Swift, Objective-C	
Backend & Cloud: Spring, GraphQL, Guice, AWS (ECS, Lambda, S3, DynamoDB, SQS, EventBridge, CloudFormation, CloudWatch, SNS)	
Frontend & Mobile: Jetpack Compose, React Native, Kotlin Coroutines / Flow, ReactJS, Sass, Node.js	
ML & Data: PyTorch, TensorFlow, NumPy, Pandas, Bedrock LLM, OpenCV	
Other Tools: Docker, Git, Linux, Gradle, Maven, CI/CD, JUnit, Mockito, MockK, GDB	