

# Yechan Kim

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## EDUCATION

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University of Virginia: August 2022 – May 2026(Expected)

- Computer Science & Economics Major | GPA: 3.81/4.0
- Relevant Coursework: AI, Data Structures, Computer Systems, Game Theory, Statistics, Probability, Machine Learning

## SKILLS

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Languages: Python, Java, JavaScript, SQL, C, Kotlin

Frameworks & Tools: React, React Native, Django, Node.js, LangChain, LangGraph, Docker, AWS, Git

## WORK EXPERIENCE

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### IBM - Developer Intern

May 2025 - August 2025

Washington D.C.

- Developed custom Model Context Protocol tools in Python to enable AI agent orchestration system using LangGraph on AWS to automate a manual client ticket workflow, reducing processing time from 14 days to minutes
- Deployed a Business Analyst AI Agent adopted by 20+ IBM employees that converts natural language questions into structured SQL queries and generates business insights, automating analytics workflow
- Implemented the Phoenix evaluation framework to run automated agent-to-agent testing and detect hallucinations, increasing AI response consistency across workflows

### OnJourney - Software Engineer Intern

May 2024 - August 2024

Seoul, South Korea

- Built and launched a full-stack customer preference platform (Node.js, PostgreSQL, JS) that collects dietary data from 200+ users to train a personalized meal recommendation model, which is the startup's core functionality
- Engineered a web crawler and data preprocessing pipeline (Node.js, Python, MongoDB) to aggregate and normalize 1M+ nutrition records into supervised training datasets, eliminating manual data collection and significantly reducing preprocessing time for the team

### Serco - QA Engineer Intern

May 2023 - August 2023

Washington D.C.

- Conducted API, UI testing, and documented 10+ Jira tickets for a large-scale U.S. Medicare web application, verifying endpoint reliability, response accuracy, and data flow between services
- Executed end-to-end feature validation against functional requirements and federal compliance standards, using Jira to track defects and coordinate testing cycles with developers and business stakeholders

## PROJECTS

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### Nector – Next.js, Docker, Node.js, PostgreSQL

- Built a centralized MCP tool registry and execution platform (Next.js, Node.js, PostgreSQL) where developers upload tools and AI agents dynamically discover and invoke them via AWS Lambda, addressing early fragmentation and single-endpoint limitations observed while working with MCP at IBM
- Developed a cryptographic agent verification system to replace static API keys with a token-based authentication system that requires signed requests for tool access, reducing the risk of credential leakage in MCP communication
- Drove early user growth by creating and publishing Instagram videos about the product, growing the account to 2,000+ followers and gathering direct user feedback to iterate and improve platform features

### Hoos Community – Django, Python, JavaScript, HTML, CSS, PostgreSQL, Heroku

- Led a 4-member engineering team as Scrum Master to develop a Reddit-style community platform for UVA students, managing sprint planning, task allocation, and release milestones over a 3-month Agile SDLC
- Built core backend features including Google OAuth authentication, event booking workflows, real-time messaging, and media storage using Django, PostgreSQL, and AWS S3
- Developed 30+ unit tests, uncovering and fixing 4 critical defects prior to deployment

### YouTube Content Filter AI – Python, JavaScript, React, Tailwind CSS, Node.js, LangChain, SQLite

- Identified a user pain point around content overload and lack of YouTube filtering tools and conceptualized a platform to let users create dynamic content categories using personalized keyword sets
- Engineered a full-stack platform using React, Tailwind CSS, Node.js, and the YouTube API, featuring a LangChain (GPT-4o) conversational agent that interprets user preferences and dynamically updates a SQLite persona system, delivering real-time, personalized content filtering

## EXTRACURRICULAR ACTIVITIES

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### Business and AI Institute - AI Developer

August 2024 - Present

Charlottesville, VA

- Built a RAG-based event-planning chatbot that reduced manual campaign planning workload by 10+ hours per week
- Worked directly with local Charlottesville clients to define project scope and translate business goals into technical requirements, enabling delivery of AI solutions aligned with key marketing and revenue objectives