Kihoon Kim

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Summary

Software Developer with experience in automating CI/CD pipelines, managing cloud-native applications, and improving system scalability and reliability. Proficient in AWS, Kubernetes, Docker, and Terraform, with hands-on experience in optimizing deployment processes and maintaining high system availability. Skilled in designing secure and cost-effective cloud infrastructure for scalable environments.

Experience

Duel, Backend Developer
Irvine, CA | Sep 2024 - present

- Automated video content extraction into Quizlet decks by optimizing costs through reuse of existing deck categories and streamlined deployment workflows using Terraform.
- Reduced S3 read times from 4,000 seconds to 0.05 seconds by implementing a DynamoDB category-based querying system.
- Deployed serverless pipelines with AWS Lambda, enabling seamless processing for 20M+ user requests.

NewsExplorer, Backend Developer
Irvine, CA | Sep 2024 - present

- Designed a system to filter, summarize, and analyze news articles based on preferences, supported by scalable infrastructure for FactCheck pipelines.
- Evaluated Cascade and Stacking methods for FactCheck Agent orchestration, balancing accuracy and resource efficiency.

Rootin, Backend Developer
Irvine, CA | Sep 2024 - present

- Developing a system to automate plant care through soil moisture measurement while optimizing automation costs by 50% through migration from MWAA (Airflow) to EventBridge.
- Implemented real-time IoT data pipelines with AWS Kinesis and MSK (Kafka) for reliable data ingestion and processing.
- Utilized CloudWatch and Lambda to dynamically manage workloads and ensure system stability.

Skills

Programming:
- Python, Bash, Javascript, PowerShell, HTML, CSS, Javascript, Node.js

Frameworks & Libraries:
- Express.js, Flask, TensorFlow, Scikit-learn, Pandas, Matplotlib

Automation:
- Terraform, Airflow, GitOps(ArgoCD)

Database:
- PostgreSQL, MySQL, DynamoDB

AWS (Practitioner Certification)
- Leveraging AWS Infrastructure and Analytics Services to Build a Serverless Data Lake
- Implemented a large-scale data processing and content generation system leveraging AI/ML and automation services

Tools:
- Figma, Slack, Notion, Jira, LLM(GPT) Prompting

Education

Bachelor of Science, Physics & Electronic System Engineering
Kookmin University, Seoul, South Korea
Expected graduation Feb 2025

Project

Undergraduate Thesis   Seoul | Dec 2023 - Aug 2024
- Generated light spectrum data using Fresnel equations and MATLAB for light passing through 8 random media, and developed a predictive model with TensorFlow. Achieved an accuracy of 99.9997% on 10,000 data points

Look at me, Backend Developer   Seoul | Mar 2024 - Jun 2024
- Developed a facial expression training tool for individuals with autism using a Node.js server to process user-uploaded images, leveraging Face API for expression analysis and scoring, and First-order Model with DeepFaceLab for generating desired emotions.
- Stored daily progress in MySQL and visualized scores through bar graphs.

Green calendar, Full-stack Developer   Seoul | Sep 2023 - Dec 2023
- developed a web application that displays weather data from the Korean Meteorological Administration and humidity and light data collected from Arduino sensors in a radar chart.
- The sensor data was sent to the Flask server via Bluedtooth module. Additionally, I implemented a calendar feature using JavaScript, HTML, and CSS to allow users to record plant watering dates.