Nien-Chen (Jane) Wu

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EDUCATION

University of California, Irvine | **Sept. 2023 – Dec. 2024**
Master of Software Engineering | *Irvine, CA*

National Chengchi University | **Sep. 2017 – Jun. 2021**
Bachelor of International Business | *Taipei, Taiwan*

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript, Node.js, HTML/CSS, SQL

Framework & Database: Spring Boot, Spring Cloud, Django, React, Next.js, REST; MySQL, PostgreSQL, MongoDB, DynamoDB

Tools: AWS - S3, EC2, Amplify, API Gateway; JUnit, Git, Docker, Jenkins, CI/CD, Maven, Postman, Jira, Agile, NPM

WORK EXPERIENCE

Prenostik | **Sept. 2024 – present**
Software Engineer Intern (Full-stack) | *Irvine, CA*

- Developed a SaaS platform for student learning and retention using **React** and **Next.js**, integrating real-time LMS data to identify student motivation and learning challenges.
- Migrated the platform's front end from React to Next.js, enabling server-side rendering to improve SEO, page load performance, and file-based routing.
- Designed and integrated backend microservices with Java, leveraging **PostgreSQL, Redis, and MongoDB** for data management, and deployed on AWS using **Docker** containers for modularity, scalability, and efficient data management.

University of California, Irvine | **Jun. 2024 – Sept. 2024**
Software Engineer Intern | *Irvine, CA*

- Built an image deduplication module in Java using MD5/SHA-256 hashing. Stored image metadata in PostgreSQL with JDBC and optimized query indexing, reducing detection to under 0.5s per image.
- Created a serverless pipeline with AWS Lambda and Java for image processing on S3 uploads, performing format conversions, and saving results back to S3. Modularized using Lambda Layers.
- Built an automated processing pipeline with AWS Lambda and S3 Event Notifications to check resolution and generate thumbnails. Stored results in S3 and used DynamoDB to track status and metadata.

ASUS | **Jul. 2021 – Mar. 2022**
Digital Marketing Analyst | *Taipei, Taiwan*

- Transformed campaign and user engagement data in Hadoop using Apache Spark. Set up Spark Structured Streaming to parse JSON data from Kafka, extracting key fields and storing data in Parquet format to enhance read/write efficiency.
- Developed a data cleaning process with Apache Spark to filter invalid records and anomalies. Applied DataFrame API filters to enforce field completeness and event order to enhance data quality.
- Automated data integrity checks with Apache Oozie and Apache NiFi, logging each data stream's processing state and writing logs to HDFS for traceability.

Microsoft | **Jul. 2020 – Jun. 2021**
Product Assistant Intern | *Taipei, Taiwan*

- Analyzed user data using VLOOKUPs and Python to identify enterprises with low usage and enhance their engagement.
- Delivered cloud solution lectures to 500-600 engineers, enabling successful onboarding of cloud services for enterprises.
- Led a campus tour campaign across 15 universities, boosting awareness and LinkedIn group membership by 1,000+.

PROJECTS

Serverless Web Application | *Backend* | *Typescript, React, AWS*

- Built a serverless blog app using **AWS Amplify, API Gateway, DynamoDB, S3, and Cognito** for user authentication.
- Designed the front end using **React** to enable a dynamic and responsive interface for CRUD operations on posts.
- Streamlined the deployment of serverless APIs using AWS CDK to automate infrastructure management.

Microservice Application | *Backend* | *Java, Spring Boot, REST*

- Built and deployed a **RESTful** microservice architecture from scratch using **Spring Boot**, implementing **JWT-based** user authentication and RBAC authorization. Enabled dynamic inter-service communication and load balancing with **Eureka** for service discovery and **Spring Cloud API Gateway** for routing.
- Managed centralized configuration with **Spring Cloud Config Server** and **Spring Cloud Bus** for real-time updates, encrypting sensitive data for enhanced security.
- Containerized microservices with **Docker** and deployed on **AWS EC2**, achieving high scalability and reliability in cloud.