Muil Yang

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Master's candidate in Computer Science (expected May 2026) with over 3 years of experience in software engineering, specializing in developing complex, scalable web applications, optimizing systems, and leveraging cloud technologies.

EXPERIENCE

Software Engineer

Midas Software, Inc.
Jan 2021 - May 2024

- Implemented a high-performance 3D model viewer using Next.js and a WebGL-based rendering engine, enabling real-time manipulation of complex architectural designs and increasing user productivity by 45%.

- Designed and integrated a secure, scalable online file-sharing system, supporting multi-format engineering documents up to 10GB.

- Built a RESTful API with Node.js to deliver visualization data, including GIS terrain data.

- Designed a CI/CD pipeline using Bitbucket Pipelines to streamline the deployment process, including building Docker images, uploading them to Amazon ECR, and redeploying to Amazon EC2.

- Modernized legacy systems with React-based frontend, significantly improving security and enhancing user experience, which led to 83% of the user base transitioning to a more secure and improved service within a quarter.

- Developed an SSO system with JWT authentication, enabling seamless login across platforms and enhancing security, which improved user experience by 67%.

Research Assistant

University of Texas at Arlington
Sep 2019 - May 2020

- Designed and developed a flood monitoring system using an embedded system and web service to monitor flood-prone areas.

- Reduced system power consumption by 45% by transitioning from Arduino Mega to Atmel microcontrollers, optimizing hardware selection for efficient computing power.

KEY PROJECTS & MILESTONES

Midas Workspace — *Midas Software, Inc.*

Collaborative web app for architectural and civil engineers.
Enables device agnostic sharing and viewing of 3D structural analysis models, with features like model annotations, file sharing, and sub-views for detailed inspections.

TECHNICAL SKILLS

Programming Languages
JavaScript/TypeScript, Python, Java, C/C++

Front-end
React.js, Next.js, Node.js, Three.js, Webpack

Back-end
Node.js, Django, Django REST framework, Spring Boot

Database Management
SQL - PostgreSQL, MySQL, SQLite
NoSQL - MongoDB

DevOps
CI/CD - Bitbucket Pipelines, Jenkins
Cloud - AWS, Microsoft Azure
IaC - Terraform
Docker, Kubernetes

Technologies
Linux, Git, WebSocket, RESTful API

CERTIFICATIONS

AWS Certified Developer - Associate
AWS Certified Security - Specialty
AWS Certified Machine Learning - Specialty

EDUCATION

University of Texas at Dallas
Master of Science in Computer Science
(Expected May 2026)

Korea National Open University
Bachelor of Science in Computer Science
GPA 3.4/4.0

Yonsei University
Bachelor of Science in Civil Engineering
GPA 3.2/4.0

University of Texas at Arlington
Study Abroad
GPA 4.0/4.0

- Implemented Inverse View Transformation feature to map Camera Coordinate System to World Coordinate System, allowing document attachment to elements like columns and slabs in 3D models.

- Designed a sub-view framework that enables users to seamlessly view related files, such as DWG or IFC, alongside 3D models, improving workflow efficiency and increasing user productivity by 33%.

- Introduced Recoil.js for lightweight state management and efficient handling of class instances, and actively integrated real-time functionality using WebSocket.

- Utilized Next.js Lazy Loading to optimize initial render by separating non-essential components, reducing bundle size by 12%.

Midas Members — *Midas Software, Inc.*

Membership management system designed to streamline user account creation, authentication, and engagement.

- Led migration from jQuery to React-based frontend, improving maintainability.

- Developed an SSO system with JWT authentication, enabling seamless login across platforms.

Nutrition Specs — *Personal*

Web service for comparing nutritional information across multiple products within the same category.

- Created a dynamic, user-friendly frontend with Next.js, enabling efficient product comparison.

- Implemented a robust backend with Django, managing data and deploying on AWS to leverage cloud services.

- Utilized OpenAI API (LLM API) to enhance data processing and comparison capabilities, ensuring accurate nutritional insights.

- Built a CI/CD pipeline using GitHub Actions to automate Docker image builds and deployments, reducing deployment time by 67%.

AI Veggie Cat — *Hackathon*

AI-driven food ingredient ordering system leveraging advanced LLM API services.

- Designed and implemented a sophisticated prompt engineering pipeline, significantly enhancing response accuracy and relevance for ingredient recommendations.

- Developed a scalable, user-friendly interface using Next.js for the frontend, ensuring responsive design and optimal user experience.

- Created a robust backend with Flask, facilitating seamless integration between the LLM API and the frontend.

- Deployed the entire system on Naver Cloud, optimizing for performance and reliability in a cloud environment.

AWARDS

National Merit Scholarship