Hyemin Doo

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https://github.com/dannydoo123 | https://github.com/DANNYDOO123/DANNYDOO123.GITHUB.IO

Software Engineer

Software Engineer passionate about solving complex problems through clean, efficient code. Skilled in full-stack web development, data analysis, and system integration across Python, React, and Node.js. I enjoy building tools that bridge data, hardware, and software—turning real-world challenges into scalable, elegant solutions.

PROFESSIONAL EXPERIENCE

MENSUS   **Jul 2025 - Present**
Software Engineer   *Seoul, South Korea*
- Developed a full-stack web monitoring system for plasma arc detection in semiconductor manufacturing facilities, allowing communication between a Windows system monitor and Linux embedded system equipment.
- Built a React.js/TypeScript frontend with real-time data visualization displaying critical plasma parameters and threshold-based alerting system engineering with a Node.js/Express.js backend service with WebSocket architecture to handle high-frequency data streams (>1kHz sampling rate).

Blue Ribbon Edu   **Jun 2024 - Aug 2024**
Data Analyst   *Gangnam-gu, Seoul, Republic of Korea*
- Developed an application using Python to automate sending data to clients via KakaoTalk Messenger API. The program extracts and formats data from Microsoft Excel. This solution reduced task completion time from two hours to just ten minutes.
- Analyzed mock test data for over 200 clients, identifying trends for both group and individual progress, and used data structures to organize and sort data for optimized feedback.

Republic of Korea Army   **Aug 2022 - Feb 2024**
Radar Operator (Squad leader)   *Namhae-gun, Gyeongsangnam-do, Republic of Korea*
- Developed a program to automate data management, which enabled rapid searches and eliminated the previous manual file-by-file search method, reducing task completion time from one hour to a click of a button
- Led a team of 12 personnel in executing mock missions, fostering leadership, teamwork, and operational efficiency under high-pressure conditions.
- Developed discipline, adaptability, and a results-driven mindset through service in a high-responsibility role, contributing to improved personal performance and team reliability

EDUCATION

SANTA CLARA UNIVERSITY   **Jun 2026**
Bachelor of Science, Computer Engineering
- **Coursework:** Object-Oriented Programming and Advanced Data Structures, Abstract Data types and Data Structures, Introduction to Embedded Systems, Algorithms, Web development, Artificial Intelligence (AI)

TECHNICAL SKILLS

- **Technical Skills**: Python, C/C++, HTML5, JavaScript, CSS, TypeScript, MongoDB, React, Node.js, Next.js, Machine Learning, PostgreSQL
- **Relevant Coursework**: Object-Oriented Programming and Advanced Data Structures, Abstract Data types and Data Structures, Introduction to Embedded Systems, Algorithms, Web development, Artificial Intelligence (AI), Machine Learning, Computer Networks, GraphQL

PROJECTS

AI-Powered Desktop Assistant
- Built an AI assistant integrating Google Calendar for event management, weather data, and voice commands.
- Used OpenAI API for natural language processing and PyAutoGUI for voice-controlled local app management (e.g., YouTube, Netflix).
- Employed SQLAlchemy to store user data, chat history, and app settings, enhancing personalization and user experience.

Vietnam Remote Jobs Website
- Developing a job board connecting Vietnamese remote workers with global employers.
- Used React for the front end, Node.js with MySQL for secure authentication and job management, and integrated Stripe API for subscription payments.
- Implemented full-stack AWS integration using Cognito, S3, and Amplify for secure auth, custom attributes, and dynamic file uploads.

Police Call Type Predictor

- Developed a comprehensive crime analysis system using San Jose police call data (+75,000 data points) to predict crime types based on location, time, and spatiotemporal patterns
- Applied machine learning techniques including K-means clustering, nearest neighbor search, and feature engineering (cyclical encoding, normalization) using Python libraries (pandas, scikit-learn, numpy, folium) to build a predictive crime analysis system with interactive geospatial visualization

ADDITIONAL INFORMATION

Korean Student Association (KSA)

Association for Computing Machinery (ACM)