

# Leon Kyuhyun Kim

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## CAREER OBJECTIVE

I am a dedicated, detail-oriented individual with expertise in software design, machine learning, and data analysis, and specialize in managing large datasets, data automation, AI integration, and cloud implementation. I am driven by a passion for continuous learning and improvement.

## PROJECTS

### Cloud-Based Twitter and Reddit Sentiment Analysis – Vanderbilt University April 2025

- Built a distributed, cloud-native sentiment analysis system across three VMs using Flask, Kafka, and MongoDB, enabling real-time processing and visualization of live social media data
- Developed and containerized a modular preprocessing pipeline with Docker and Kafka, improving system scalability, reducing latency, and supporting fault-tolerant communication between microservices

### Autonomous Vehicle Eco-Driving Model – Vanderbilt University December 2024

- Designed and implemented a real-time car-following model in C++ to improve vehicle spacing, traffic flow, and fuel efficiency in simulation testing
- Developed and validated traffic simulations with 8+ vehicles using MATLAB and ROS, optimizing dynamic speed adjustments to reduce congestion across varying highway traffic conditions

## EDUCATION

### Vanderbilt University (Nashville, TN) August 2022 - May 2026

Major in **Computer Science** and **Human and Organizational Development**

*Notable Courses:* Intermediate Software Design, Programming Languages, Principles of Operating Systems, Algorithms, Theory of Automata, Programming Design and Data Structures, Applied Machine Learning, Talent Management and Organizational Fit, Understanding Organizations, Public Policy

## WORK EXPERIENCE

### Publicis Sapient Chicago, IL

- *Incoming Software Engineer Intern* May 2025 - August 2025

### Happy Sun Enterprise Duluth, GA

- *Software Engineer Intern* May 2024 - August 2024
  - Developed a comprehensive database on PostgreSQL and Python to store and manage sales and product data.
  - Created a chatbot-integrated database to facilitate automated data retrieval and analysis using OpenAI's API, enabling real time insights and decision-making.
  - Dynamically analyzes sales data across different years and quarters to compare key metrics, perform analyses, and graph data

## PUBLICATION

### *Data Visualization and Interactive Dashboards with Python* Published January 2024

Book co-author

- A comprehensive guide for data management, analysis, and interactive visualization utilizing Jupyter, Plotly, Dash with Github, Heroku, AWS, and Google Cloud
- Detailed explanation of data analysis and visualization fundamentals, demonstrated through real-world examples like revenue and Covid-19 analysis.

## ACTIVITIES

**Asian American Student Association** - Foster empowerment of Asian and Asian American cultures through hosting social events. Involved in organizing and promoting various social and cultural events.

## SKILLS

Java, Python, RStudio, Microsoft Suite, Heroku, C++, AWS Beanstalk, HTML/CSS, SQL, Natural Language Processing (NLP), Full Stack, MATLAB, Streamlit, Machine Learning, Chatbot Development, Database Management, Korean