

# Sang Hyun (Aaron) Kim

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## EDUCATION

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**Purdue University**, West Lafayette

*Aug 2022 ~ May 2025*

**Bachelor of Science in Computer Science & Applied Statistics**

- Graduate-Level Course: Artificial Intelligence, Mathematics of Quantum Computing, Data Mining, Algorithm Design
- Undergraduate-Level Course: Probability, Statistical Theory, Data Engineering, Vector Calculus, Data Structure
- Awards & Certificate:
  - Data Science Undergraduate Certificate, Purdue University, 2024
  - Intro to Quantum Information, KAIST, June 2024
  - Data Fest Winner, American Statistical Association, April 2024
- Activities: Hackathon Organizer, Quantum Student Organization, Global Science Partner, Competitive Programmers Union

## TECHNICAL SKILL

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- **Languages:** Python, C++, Rust, Q#, R, Java, SQL, Swift, HTML, CSS, JavaScript, Ruby, Julia
- **Tools:** Git, GitHub, PyTorch, TensorFlow, Keras, FastAI, VS Code, Spark, Azure, GCP, Unity

## EXPERIENCE

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- **FlavourIQ** | Data Science Intern | Sydney, Australia *May 2024 ~ Aug 2024*
  - Engineered **Graph Neural Networks** (GNN) to analyze the impact of **70+** volatile organic compounds on user taste preferences, linking **31** key sensory attributes and discovering influential molecular formula
  - Designed a recommendation system that analyzes and identifies overlapping organic compound combinations between previously favored foods and new options, offering personalized culinary recommendations
- **Purdue University** | West Lafayette, IN
  - Undergraduate Researcher | *Professor Kihara's Lab* *March 2024 ~ Present*
    - Developed computational methods for Protein Function Prediction (PFP), utilizing deep learning, and achieved **top 10%** in major scientific assessments like CAPRI and CASP, demonstrating exceptional accuracy and innovation
  - Undergraduate Teaching Assistant | *Data Engineering, CS Student Board Help Room* *Jan 2024 ~ Present*
    - Facilitated lab sessions and office hours for **200+** students in Data Engineering course, focusing on practical applications
    - Assisted in Help Room, supporting for *C Programming* and *Discrete Mathematics*, focusing on algorithm and proofs
  - Quantum Computing Research Assistant *Oct 2023 ~ Feb 2024*
    - Engaged in research on **Quantum Neural Networks** (QNNs), focusing on transforming current neural network models to QNN models using Python and **Q#** and tools like Qiskit, Cirq, and TensorFlow Quantum
- **Procter & Gamble** | Meta Analysis Research Assistant | Remote *Jan 2024 ~ May 2024*
  - Implemented a Network Meta-Analysis (NMA) automation app with **R** and **R Shiny**, predicting prototype effectiveness
  - Automated the comparison of **1000+** product studies, streamlining product testing and enhancing efficiency
- **Nuvve Holding Corp** | Data Science Research Assistant | West Lafayette, IN *Aug 2022 ~ Dec 2022*
  - Predicted customer driving patterns using Long Short-Term Memory (LSTM) models with an 8-hour prediction window
  - Optimized energy price bidding, achieving a **34%** improvement in accuracy using over **4000** data points

## PROJECTS

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- **LearnerLink AI** | Data Fest 2024 *April 2024*
  - Designed a Machine Reading Comprehension (MRC) system and fine-tuned Google's mT5 model, linking topics from End of Chapter Questions to relevant sections of the text and enhancing study strategies
  - Competed against **60+** hackers and won Data Fest, receiving awards for "Best in Show" and "Best Use of Outside Data"
- **Rescue VR** *Feb 2024*
  - Developed VR for rescue operations, enabling drone-like landscape viewing and precise person localization using **YOLO** and **CNN** with implementation of LLM-based chatbot using Python, C#, and Unity
  - Added Voice to Text and Text to Voice models, allowing users to interact with the chatbot through voice while using VR
- **QUANTUM-TELE** *Nov 2023 ~ Dec 2023*
  - Developed **Quantum Time-Series** analysis with improved predictive accuracy and automated data delivery to Telegram
- **Cample** *Aug 2023 ~ Dec 2023*
  - Developed product trading **iOS** app with **Azure**, implementing custom APIs for content moderation and app functionalities