Tom (Wonsuk) Jeong

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EDUCATION

Georgia Institute of Technology — **May 2025**
BS in Computer Science, Intelligence and Media; BS in Mathematics — *Atlanta, GA*

Course work: Advanced Algorithms, Artificial Intelligence, Machine Learning, Computer Perception, Automata and Complexity Theory, Information Visualization, Advanced Linear Algebra, Discrete Mathematics, Probability and Statistics, Probability Theory, Differential Equations, Abstract Algebra, Number Theory, Combinatorics, Graph Theory, Analysis I

EXPERIENCE

Georgia Institute of Technology — **Present**
Research Assistant, Dr. Sarioglu Lab — *Atlanta, GA*

- Contributed to the development of a novel drug detection system for preventing drug-facilitated sexual assault; worked closely with Dr. Sarioglu and Dr. Tevhide from the School of Chemistry and Biochemistry.
- Developed and implemented a comprehensive management system and database for protein synthesis using Python and SQL, streamlining data collection, analysis, and reporting processes.
- Utilized coding expertise to create custom scripts for automated data processing and visualization, significantly improving efficiency in protein synthesis experiments and data interpretation.

LEADERSHIP

CubeSAT Flight Computer Supervisor & Coach — **Dec 2023 - Present**

- Lead a team of 10 students in designing and developing a Cube Satellite (CubeSAT) for space launch, overseeing all aspects including flight software development using C++ and assembly language.
- Manage $80,000 worth of equipment and resources for the school's astronomy team and CubeSAT project, handling logistics, talent organization, and stakeholder analysis.
- Provide technical assistance and encouragement to students, contributing to the project winning the *2023 NCSSS Innovative STEM Student Program of the Year Award.*

RESEARCH & PROJECTS

Frame: AI Search & Text Editor — *SwiftUI, React, Python, Flask, AWS SageMaker, Claude API, Heroku*

- Developed a MacOS app integrating writing and search functionalities, enhancing research efficiency through retrieval-augmented generation for context-aware search results.
- Designed a responsive UI using SwiftUI with embedded React.js, connected to a Flask backend that utilized Claude API for search assistance, and deployed on AWS SageMaker and Heroku.
- Successfully launched a beta version with 15 active users, demonstrating the app's practical value and market potential.

Reducible: ML Model Optimization — *Python, TensorFlow, Keras, Numpy*

- Created "Reducible," an innovative approach to compress neural networks while preserving accuracy.
- Developed a custom TensorFlow layer that intelligently reduces model size, achieving a 66% reduction with minimal impact on performance.

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, R, SwiftUI, CUDA, SQL, HTML/CSS
Frameworks & Libraries: TensorFlow, Keras, NumPy, React, Flask, FastAPI, pandas
Cloud & DevOps: AWS (SageMaker, EC2, S3), Heroku, Docker, Git, CI/CD
Databases: MongoDB, MySQL, PostgreSQL, Redis
Computational Biology: PyMol, RaptorX, Bioinformatics tools
Other: RESTful APIs, Agile methodologies, Microservices architecture, Native-level Korean