Jonathan Gil

U.S. Citizen | jonathangil@gatech.edu | 770-595-7773

github.com/jonagil1661 | linkedin.com/in/jonagil1661 | jonathangil.me

Education

Georgia Institute of Technology – Atlanta, GA <div align="right">May 2027</div>

- *Bachelor of Science in Computer Science: Info/Internetwork-Intelligence*
- Coursework: Data Structures and Algorithms, Design and Analysis of Algorithms, Machine Learning, Systems and Networks, Introduction to Database Systems, Objects and Design, Linear Algebra

Skills

Programming Languages: C/C++, Python, Java, C#, SQL, JavaScript, HTML/CSS, Dart

Frameworks and Technologies: Flutter, .NET, FastAPI, Firebase, TensorFlow, Docker, Git/GitHub, Android Studio, VS Code, IntelliJ

Concepts: Machine Learning, Deep Learning, Algorithms, Systems Design, Database Management

Experience

Undergraduate Researcher - GT Automated Algorithm Design <div align="right">Jan 2025 – Present</div>

- Minimized error by 20% and optimized model complexity by implementing genetic programming and multi-objective optimization, including symbolic regression, by utilizing the DEAP Python library.
- Achieved greater accuracy than traditional ML models by leveraging NSGA-II selection and optimizing 92 generations, enabled by automating the machine learning algorithm design on the Titanic dataset.
- Facilitated 5 Monte Carlo trials to evaluate and score algorithm performance by enabling a local computer to function as a worker process within an evolutionary framework via a server connection through SQL.

Projects

BuzzString | buzzstring.org | *Flutter, Dart, Google OAuth, Firestore* <div align="right">Aug 2025 – Oct 2025</div>

- Deployed a full-stack web app for Georgia Tech's badminton club, serving 80+ active users who submit and track racket stringing requests in real time.
- Implemented Google Sign-In (v6.3.0) and Firebase Firestore to manage stringing specifications, history, and live service status updates.

Buzz Brief | *React Native, Expo Go, Supabase, FastAPI, Python, FFmpeg* <div align="right">Sep 2025</div>

- Created a React Native mobile app in a team of three that transforms Gmail inboxes into a TikTok-style feed, with swipeable, cached clips generated from daily emails.
- Programmed a FastAPI + Supabase backend with secure Gmail OAuth and agentic LLM pipelines (OpenAI GPT-3.5, TTS, FFmpeg) to summarize emails and produce short videos.

DermaScan | *Python, TensorFlow, Streamlit* <div align="right">Feb 2025</div>

- Launched an interactive web application in a five-person team that analyzes skin images and provides diagnostic insights, integrating a Streamlit-based interface for live predictions and enhanced accessibility.
- Accomplished 80% accuracy in classifying skin lesions by training a Convolutional Neural Network (CNN) on 10,000 images from the HAM10000 dataset.

WanderSync Navigation App | *Java, Firebase, MVVM* <div align="right">Aug 2024 - Nov 2024</div>

- Built an Android navigation app in an Agile team that provides seamless real-time location tracking, leveraging MVVM and Firebase for scalable, real-time user collaboration.
- Enabled dynamic user invitations for shared access by engineering a secure user authentication system and enabled real-time collaboration.

Fractal Tree Visualizer | *Java, Swing* <div align="right">Mar 2024</div>

- Developed an interactive fractal tree visualizer in Java using Swing, incorporating buttons and sliders for dynamic adjustments.
- Designed as an educational tool to demonstrate recursive stack behavior through graphical depictions, and engineered a linked list stack to dynamically modify branch thickness, layers, and angles.