

Ben Irastorza

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SUMMARY

Software Engineer with strong programming, mathematics, and data analysis skills. Experienced in developing AI and data-driven applications, with a strong background in conducting in-depth research.

EDUCATION

Georgia Institute of Technology

Atlanta, GA

Bachelor of Science in Computer Science

Expected May 2026

GPA: 3.4

- **Concentration:** Artificial Intelligence and Information Internetworks
- **Relevant Coursework:** *Data Structures & Algorithms*, Object Oriented Programming, Database Systems, Linear Algebra, Multivariable Calculus, Probability & Statistics, Discrete Math
- **Involvement:** IFC Social Committee, Lambda Chi Alpha Fraternity (Founding Member), GT Catholic Center

EXPERIENCE

Undergraduate Researcher

Aug. 2024 – Present

Georgia Tech Automotive LiDAR Lab

Atlanta, GA

- Researching advanced automotive systems to enhance vehicle autonomy through LiDAR technology.
- Developing Python-based edge detection algorithms using OpenCV in a Dockerized ROS2 environment.
- Collaborating with the electrical and mechanical team to test and optimize sensor data for enhancing driving performance.

Data Science Intern

May 2024 – Aug. 2024

The Parker Avery Group

Atlanta, GA

- Developed a custom chatbot for retail analytics.
- Increased model accuracy through implementing the Retrieval-Augmented Generation (RAG) pipeline.
- Generated a specialized training dataset using advanced PostgreSQL queries to address forecast bias and accuracy questions to improve predictive model performance.
- Standardized the development environment by creating and configuring environment YAML files using Conda, ensuring consistent setups across all team members' systems.

PROJECTS

Spotify Wrapped | *Java, Android SDK, Firebase, Git, Figma*

March 2024 – May 2024

- Built on the Model-View-ViewModel (MVVM) architecture.
- Implemented a CI/CD pipeline using Git/GitHub Actions, automating builds and testing with Gradle.
- Designed the front end in Figma and transferred the layouts to XML for Android implementation.
- Used Firebase to manage account creation, login, and secure user credentials.
- Integrated AI to enhance the app with conversational capabilities based on user preferences.

Portfolio Website | *HTML, CSS, Git*

June 2024 – Present

- Building a responsive portfolio website to overview my skills, projects, and experience comprehensively.
- Implementing HTML for structured content and leveraged CSS for visual styling and layout design.

Personal Computer Building Business

Aug. 2020 – Present

- Handle the component selection, cost management, hardware installation, and system software arrangement.
- Implement performance optimization and cost-efficiency strategies by selecting and configuring components to meet the user's precise specifications and usage requirements.
- Tune device driver configurations and OS parameters to enhance system performance and operational efficiency.

TECHNICAL SKILLS

Languages: Python, Java, C, SQL, HTML, CSS

Libraries/Frameworks: LangChain, NumPy, Pandas, JUnit, JavaFX

Development Tools: Android SDK, Jira, Git, Docker, Conda, Figma

Cloud/Databases: PostgreSQL, MySQL, Firebase, Milvus