

# Theodore Barzyk

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## EDUCATION

**University of North Carolina at Chapel Hill | Chapel Hill, NC** May 2028

**B.S. in Computer Science, B.A. in Philosophy / GPA: 3.96**

- **Study Abroad:** Studied Technology, Ethics, and Culture in Stockholm, Sweden

May - June 2025

## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, TypeScript, C, C#, Swift, HTML/CSS

**Frameworks:** React, Next.js, Node.js, Express, FastAPI, SwiftUI, Flutter, Unity, Streamlit

**Databases:** SQL (PostgreSQL), MongoDB, SQLAlchemy, Firebase, Supabase

**Tools:** Docker, Git/GitHub, GitHub Actions, REST APIs, Nginx, DigitalOcean, Linux, Bash, Tableau, Excel

## EXPERIENCE

**Climate 2.0 at Carolina | Chapel Hill, NC – Project Lead, Tech Track** Oct. 2025 – Present

- Leading the tech track for Climate 2.0, an interdisciplinary sustainability initiative spanning policy, tech, and community engagement; doing user research, survey design, and stakeholder alignment with local orgs.
- Overseeing development of a SwiftUI/Firebase campus reuse marketplace app featuring waste-diversion metrics and integration with existing campus systems.

**CS + Social Good | Chapel Hill, NC – Developer, CancerLINC** Sept. 2025 – Present

- Designing database schemas and developing UI components for a cross-platform Flutter/Firebase app and React admin dashboard supporting legal/financial assistance programs, using Agile workflow and Git/GitHub collaboration.
- Building software to serve 709 patients, 180 volunteers, and managing ~\$1M in annual donations (2025).

**App Team Carolina | Chapel Hill, NC – iOS Developer, PORCH** Aug. 2025 – Present

- Developing, debugging, and maintaining a SwiftUI/Firebase iOS app for food donation logistics, designing UI components, integrating frontend and backend features, and implementing data validation to support 10,000+ lbs donated monthly.

## PROJECTS

**Band Manager | Personal Project** Oct. 2025

- Built full-stack platform for managing bands using Next.js (TypeScript), FastAPI (Python), and PostgreSQL.
- Implemented Supabase authentication, role-based access, and RESTful APIs with SQLAlchemy.
- Deployed via GitHub Actions CI/CD on DigitalOcean with Nginx and SSL, ensuring scalable performance.

**Astronaut Mission Predictor | Carolina Data Challenge** Sept. 2025

- Led team to build a predictive ML model in Python (scikit-learn) to forecast astronaut mission details based on demographics. Designed and deployed interactive Streamlit UI for data visualization.
- Cleaned and processed +700-record dataset, achieved  $R^2 = 0.2838$  for NASA astronaut flight time prediction.

**Trailbook | App Team Carolina** Apr. 2025

- Developed full-stack SwiftUI iOS application for trip journaling using CoreLocation and the OpenWeather API.
- Built with MVVM architecture and Firebase Firestore for real-time backend storage and user authentication.

**Reading List | App Team Carolina** Dec. 2024

- Developed a full-stack reading list app with a SwiftUI iOS frontend and Node.js/Express/MongoDB backend.
- Added JWT auth, OpenLibrary API book search, list creation; tested RESTful API endpoints for CRUD operations.

**Tower Rescue | Game Dev Project** Nov. 2024

- Led team to create Unity/C# arcade platformer with procedural levels, audio FX; won Fall 2024 Game Jam.