

## Ethan P. Bonsall

Philadelphia, PA • Chapel Hill, NC

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## PROFESSIONAL SUMMARY

Undergraduate Student at the University of North Carolina at Chapel Hill (GPA: 3.72) with hands-on experience in software engineering, data engineering, AI/ML, and full-stack web development. Skilled in building intelligent applications using OpenAI APIs, TensorFlow, and Python, alongside strong proficiency in Java and C++ through multiple software development courses. Experienced with modern frameworks (Next.js, Angular, React) and databases (SQL, Supabase, Databricks), with a proven track record of delivering scalable web apps, secure data pipelines, and optimized user experiences. Demonstrated success in branding, UI/UX design, and deploying professional websites for clients. Strong collaborator in Agile environments with emphasis on clean code, test-driven development, and high data quality standards.

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## EDUCATION

**University of North Carolina at Chapel Hill** — *Bachelor of Science in Computer Science and Data Science*

**GPA:** 3.72

Relevant Courses: Modern Web Programming, Foundations of Software Engineering, Software Engineering Lab, Algorithms and Analysis, Systems Fundamentals

Activities: AI Club (workshops + AI project development), CSSG (nonprofit web development projects)

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## WORK EXPERIENCE

### Associate Software Developer, Sheetz

August 2025 – Present

- Improved data quality across more than 2,000 database tables by identifying and removing corrupted or incomplete records and using AI-assisted documentation to enhance data discoverability company-wide.
- Built an automated Python QA framework that runs after each pull request to validate data integrity and ensure long-term reliability across production releases.
- Redesigned and optimized data pipelines to eliminate duplication, improve analytics accuracy, and strengthen business insights.
- Collaborated in an Agile environment, performing peer code reviews and maintaining best practices for scalable, maintainable data solutions.
- Partnered with cross-functional teams to standardize validation procedures and documentation, reducing data incidents and improving accessibility.
- Skills: Python, SQL, Databricks, Git, Agile Development

### Associate Software Developer Intern, Sheetz

May 2025 – August 2025

- Automated SQL/Python scripts to validate pipelines and enforce enterprise data quality standards.
- Optimized analytics workflows and improved data reliability across multiple business domains.
- Skills: SQL, Python, Databricks

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## SKILLS

**Programming Languages:** Java, Python, C++, TypeScript, SQL

**AI/ML Tools:** TensorFlow, OpenAI API, CNNs, Machine Vision, Prompt Engineering

**Frameworks & Tools:** Next.js, Angular, React, Tailwind CSS, NW.js, Supabase, Vercel

**Data Tools:** Databricks, Tableau, Microsoft Excel, Google Sheets

**Methodologies:** Agile/Scrum, Test-Driven Development (TDD), Version Control (Git/GitHub)

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## PROJECTS

- CSXL Chatbot (UNC Chapel Hill)

Developed an AI-powered chatbot using Angular, Python, and the OpenAI API to allow students to make study room reservations, TA scheduling, and course recommendations in natural language.

Skills: Prompt Engineering, Python, SQLAlchemy, Angular, Agile Development

- Dermatology CNN Classifier (UNC Award-Winning Project)

Built a convolutional neural network (CNN) using TensorFlow and Python to classify dermatological images as malignant or benign. Implemented data augmentation, convolutional layers, and dropout for performance optimization.

Skills: Python, TensorFlow, Machine Vision, Deep Learning, Image Classification

- Beautiful Together Pet Matching

Created a pet adoption web platform using JavaScript and Supabase. Implemented web scraping and a dynamic matching system to improve adoption engagement.

Skills: JavaScript, Supabase, Web Scraping, Web Development

- Magic Hour Portraits

Built a full-stack photography portfolio website with admin tools for uploading projects and managing blog posts.

Skills: TypeScript, Next.js, Tailwind CSS, API Development

- Pediatric Blue Book

Collaborated with healthcare professionals to build a HIPAA-compliant web application for pediatric nutrient management and formula planning using Supabase and PostgreSQL.

Skills: TypeScript, Supabase, PostgreSQL, Data Security, Client Communication

- NorthStar (HackNC Project)

Developed an AI-powered personal finance dashboard using TypeScript, Next.js, and the Gemini API to provide budgeting tools and AI-driven investment recommendations.

Skills: TypeScript, Next.js, AI Integration, Data Modeling