

Jonathan Zeng

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EDUCATION

Yale University

Expected Graduation Date: May 2028

Bachelor of Science in Computer Science and Mathematics

- **GPA:** 3.93/4.0
- **Relevant Coursework:** Introduction to Systems Programming and Computer Organization, Building Game Engines, Data Structures and Programming Techniques, Analysis 1, Discrete Mathematics, Linear Algebra

EXPERIENCE

Student Researcher

June 2025 – Present

Shah Lab, Yale University

- Designing a faster OBJ parser to load and reload objects in Blender 3D using multithreading and SIMD optimizations.
- Collaborating with other undergraduate and master's students to discuss methods and results.

Software Engineer

July 2025 – Present

Solis Consulting

- Building RoofRoute with Kotlin in Android Studio, an app for roof repair canvassers to find an optimal route of homes based on parcel and storm data
- Designing the UI and layout of the app and implemented additional features like voice transcription with AI-generated summary.

Student Researcher

June 2023 – March 2024

I3T Research Lab, ECE Department, Duke University

- Created and analyzed a game-engine based dataset for monocular Simultaneous Localization and Mapping (SLAM) algorithms using OpenCV for python and the Unreal game engine
- Conducted additional experiments on various SLAM parameters and found optimal number of features, levels, and scale factor for current state-of-the-art SLAM systems
- Presented research at NC Science & Engineering Fair, SNCU Research & Creativity Symposium, and lab meetings

Teaching Assistant

August 2023 — May 2024

NCSSM Computer Science Department

- Assisted students in all computer science courses with office hours, events, and online tutorials
- Updated CS Department website and social media with CS opportunities and newsletters

PROJECTS

Seaside Scavenger | Lua

- Designed a matching puzzle video game with Lua and the Love2D framework
- Drew all sprites, models, and backgrounds in a pixel-art style with Aseprite
- Play-tested game with peers using a feedback survey and wrote QA report on iteration process

TECHNICAL SKILLS

Languages: Python, Java, C, C++, Lua, C#, HTML, CSS, Racket

Tools: Git, Linux, Visual Studio, PyCharm, IntelliJ, Eclipse

Libraries: OpenGL, PyTorch, TensorFlow, OpenCV, NumPy, Matplotlib, Pandas

AWARDS

- American Invitational Mathematics Exam (AIME) Qualifier x 4
- High School Mathematical Contest in Modeling (HiMCM) Finalist (top 5%)
- USA Computing Olympiad (USACO) Silver