**DANIEL HE**
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## EDUCATION

**Stony Brook University** Suffolk County, NY
Bachelor of Science in Computer Science 6/2027
**Cumulative GPA:** 3.9

**Stuyvesant High School** New York, NY
**Cumulative GPA:** 95/100 6/2023

## EXPERIENCE

**ECGC:** *VBS teacher* 7/2024 - 8/2024
- Taught English, math, science, social studies, Chinese, art, and moral education; conducted daily lectures and presentations
- Planned and created the entire seven-week curriculum for 4th-6th graders; maintained open communication with parents

**Engram:** *EdTech software development intern* 6/2023 - 9/2023
- Engineered an AI-powered essay writing platform for an educational website, offering adaptive learning levels ranging from fill-in-the-blank templates to timed exercises integrating Large Language Models (LLMs) to provide grading and feedback
- Translated 30+ complex Figma designs into highly functional Vue components, boosting engagement and user experience

**2022 Google Mentorship Program:** *team head* 3/2022 - 6/2022
- Engineered a dynamic recipe website that recommends personalized dishes based on user-specified ingredients and diet
- Led a team of peers to build a full-stack website (React, MongoDB, Express) under the mentorship of a Google engineer

**Rajbhandari Lab at the Icahn School of Medicine:** *volunteer* 6/2022 - 11/2022
- Conducted independent biomolecular research, authored a paper, and presented findings at a lab conference
- Investigated a protein (GTF2I) as a novel factor in fat cell differentiation with implications for treating malignant obesity and performed advanced lab techniques including cell cryopreservation, RNA isolation, qPCR, and more

**Steel City Codes I.S. 5 Charter:** *volunteer* 3/2022 - 6/2022
- Provided weekly programming mentorship to middle school students regarding coding principles, created assessments and activities to build on top of the curriculum, and led a student-selected final project, including calculator and tic-tac-toe applications

## PROJECTS ***portfolio website****: grasscompany.tech*

**Computer Graphics** 1/2023 - 6/2023
- Created a graphics engine in Java using polygon lists to render 3D meshes, optimized with back-face culling and z-buffering
- Implemented lighting (ambient, diffuse, specular) with Phong reflection model and Gouraud shading algorithm
- Designed relative and global coordinate systems; overall heavy focus on matrix and vector math

**Software Development** 9/2022 - 10/2024
- Built several full-stack projects including a database visualizer, recipe website, and storyboard forum, among others
- Skilled with React, Vue, and Flask with strong understanding of RESTful APIs, HTTP protocol, and managing large databases

**Chess Application/Engine** 9/2021 - 6/2022
- Developed a Java chess application with a custom image rendering and animation framework for PPM files (sprites/tiles)
- Implemented strategic gameplay through an AI bot evaluating moves based on piece value and threat potential, considering two moves ahead. Utilized OOP design and unique tile objects to manage legal moves without recursion

## ACHIEVEMENTS

**2023 Genes in Space semifinalist (top 30)**
- National STEM competition where winning proposal is conducted on the International Space Station; showcased innovative problem-solving skills in proposing genetic experiments for studying adipose tissue in zero-gravity environments

**2020 USA Biology Olympiad semifinalist**
- National biology competition for high schools

**SAT Score**
- 1590/1600 (800/800 Math, 790/800 English)

## SKILLS AND OTHER ACTIVITIES

- **Skills:** Git, Linux, C, Python, Java, JavaScript, HTML, CSS, SQL, Flask, Vue 3, React, UI/UX, PowerPoint, Word,
- **Languages:** English, Mandarin
- **Interests:** Drawing, reading, hiking, recreational clamming