

# Tyler Gurth

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## EDUCATION

**Brown University** 4.00/4.00 GPA Providence, RI | **Expected Graduation May 2025**  
*Sc.B. in Computer Science, A.B. in History of Art and Architecture*  
Relevant Courses: Introduction to Object Oriented Programming, Program Design with Data Structures and Algorithms, Introduction to Discrete Structures and Probability, Software Engineering, Introduction to Computer Systems, Linear Algebra  
**Parsippany Hills High School**, 4.81/4.00 GPA *Valedictorian of Class* Morris Plains, NJ | Class of 2021

## RESEARCH

**The Virtual Rosetta**, *Researcher* Providence, RI | April 2022 – September 2022

- Researched effective methods for dimensional reduction data visualization such as T-SNE and UMAP
- Scripted Python BeautifulSoup web scraping programs to convert the HTML corpus of data into PNGs and compile datasets
- Generated serialized matrices, minimum spanning trees, and force directed graphs using Python science libraries like SciPy, Sci-Kit Learn, and Pandas
- Visualized complex data in actionable graphs using PyPlot, revealing qualitative trends

## WORK EXPERIENCE

**Brown University Computer Science**, *Head Teaching Assistant* Providence, RI | September 2022 – Present

- Holds weekly office hours and labs to help students with course material and programming projects
- Assists Professor in grading, designing rubrics, and creating assignments for the course
- Manages a course staff of over 30 TAs, and acts as a touchpoint between the TAs and professor

**Escape Garden State**, *Technical Developer and Game Master* Fairfield, NJ | June 2021 – November 2022

- Developed and designed new escape room GUI web app with Vite.js and Google Firebase database
- Streamlined employee tasks by programming a JavaScript Discord bot with time conversion math utils and report generating system
- Trained 5 new employees in how to run rooms, use the company web apps, and open/close the facility

**Brown University Admissions**, *Tour Guide and Admissions Ambassador* Providence, RI | April 2022 – Present

- Guides weekly tours through campus, answering questions based on campus knowledge and practicing public speaking
- Represents Brown as an institution and maintains a positive image for the University

## RELEVANT PROJECTS

**Scrappy**, *Developer* December 2022

- Used React TypeScript Framework to build out the components of the site, coupled with React Router to create a navigable state system authenticated through Google OAuth
- Developed a Spark API server to query and store information in a MongoDB Java database
- Programmed an NLP sorting algorithm using GloVe English feature vectors to sort posts based on relevant hashtags

## LEADERSHIP EXPERIENCE

**Brown University Band**, *Saxophone Section Leader, Dance Captain, Alumni Liaison* Providence, RI | December 2021 – Present

- Coaches section throughout sectional rehearsals, ensuring all members are confident in the music to be played
- Accounts for all members of the section, teaching newer members band traditions and marching style
- Maintains relationships with alumni, raises money through fundraising campaigns, issues weekly updates to community

## SKILLS & INTERESTS

**Technical Skills:** React, MongoDB, AWS, Node, GitHub, Git, Firebase, Jest, Figma, Blender, Photoshop, and Microsoft Office Suite  
**Programming Languages:** Java, Python, JavaScript, HTML, CSS, TypeScript, C  
**Languages:** English (Native) and Spanish  
**Interests:** Using Artificial Intelligence to replicate, produce, date, and credit artwork. 3D modeling of architectural designs.