Elliot Topper

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Education

The College of New Jersey (TCNJ), Ewing, NJ Bachelor of Science in Computer Science, Minor in Interactive Multimedia *May 2025* GPA: 3.99 / 4

Skills

Languages: Javascript, Typescript, Python, Java, PHP, C, C++, C#

Tools & Frameworks: React, Next.js, Node.js, Express, Flask, jQuery, TailwindCSS, Bootstrap, Unity, MATLAB

Frontend Tools: HTML, CSS, Yarn, NPM, Material UI, FontAwesome Backend Tools: Git/GitHub, PostGreSQL, MySQL, MongoDB, Redis, Firebase

 $\textbf{Other Skills:} \ Software \ Engineering, \ Debugging, \ Data \ Science, \ Collaborative \ Problem \ Solving, \ Public \ Speaking, \ Leadership, \ Public \ Speaking, \ Public$

Technical Writing

Work and Research Experience

• National Institute of Standards and Technology (NIST), Boulder, CO June 2024 - Aug 2024 Full-Stack Development Intern (SURF Research Fellow - Statistical Engineering Division)

- Developed a Python web application to dynamically calculate microbial Limits of Detection (LOD)
- o Improved performance and accessibility of existing web applications through consultation
- Developed a tool in Python for generating future web applications for statistical models
- Department of Computer Science, TCNJ, Ewing, NJ

Virtual Reality Research Assistant (MUSE Fellow - Dr. S.M.S. Ferdous)

Jan 2022 - July 2023

- Collected and analyzed electroencephalogram (EEG) data in VR using MATLAB and Python to develop standardized processes of data analysis for cybersickness research
- Developed an online data management portal for cybersickness studies in a team environment, using PHP and MySQL
- Conducted and managed a study in cybersickness data collection
- o Funded by NSF

Computer Science Department Drop-In Tutor

Sept 2024 - May 2025

 Courses tutored: Introduction to Computer Science, Data Structures, Discrete Structures, Computer Architecture, Analysis of Algorithms, Database Systems, Operating Systems, Programming Languages, Software Engineering

Computer Science Peer Mentor - Introduction to Computer Science, Data Structures Sept 2023 - Dec 2024

Conference Presentations and Papers

- "Visualsickness: A web application to record and organize cybersickness data." E. Topper, P. Arroyave, S.M.S. Ferdous. 2023 IEEE Conference on Virtual Reality and 3D User Interfaces. Shanghai, China (Virtual). 25-29 March 2023. Corresponding manuscript: 10.1109/VRW58643.2023.00104.
- "Initial feasibility study of a child friendly animated cybersickness questionnaire." P. Arroyave, E. Topper, M. Kahora, S.M.S. Ferdous. *ACM CHI 2023*. Hamburg, Germany. *23-28 April 2023*.

Projects and Collaborations

- <u>elliotbtopper.com</u> Portfolio website built in *Next.js* and *MongoDB*, which showcases my project work
- <u>List n' Learn</u> Visually-accessible flashcard application, built collaboratively in *React* with *MongoDB*
- <u>WordAround</u> Wordle-like puzzle game that challenges players to guess letters in a circularly-oriented word; developed in *HTML*, *CSS*, and *JavaScript*

Honors and Awards

TCNJ Computer Science Fourth Year Award - 2025; TCNJ Computer Science Dean's List (Fall 2021 - Spring 2025); TCNJ Computer Science Third Year Award - 2024; Phi Kappa Phi - 2024; Upsilon Pi Epsilon - 2023; TCNJ Computer Science Second Year Award - 2023; TCNJ Computer Science First Year Award - 2022; HackTCNJ Best Hack - 2022

Activities

• TCNJ Japanese Student Association, Ewing, NJ

President (100+ members, 10 board members, over 25 events) Treasurer (managed a \$30,000 budget) Fundraising Co-Chair (fundraised over \$1,800)

Apr 2024 - May 2025 Apr 2023 - May 2024

Apr 2022 - May 2023

• Other Affiliations: Asian American Association, TCNJ Barkada, Guatemalan Student Association, Korean Student Association, Vietnamese Student Association