Elliot Topper

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Education

The College of New Jersey (TCNJ), Ewing, NJ *May 2025*
Bachelor of Science in Computer Science, Minor in Interactive Multimedia 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
Other Skills: Problem Solving, Public Speaking, Collaboration, Leadership, Academic Writing

Work and Research Experience

- **National Institute of Standards and Technology (NIST)**, Boulder, CO *June 2024 - Aug 2024*
  SURF Research Fellow - Statistical Engineering Division
  - Developed a *Python* web application to dynamically calculate microbial Limits of Detection (LOD)
  - 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
  Computer Science Department Drop-In Tutor *Sept 2024 - Present*
  Computer Science Peer Mentor - Computer Science I, Data Structures *Sept 2023 - Dec 2024*
  Researcher (VR) - Dr. S.M.S. Ferdous *Jan 2022 - July 2023*
  - 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
  - Collected and analyzed electroencephalogram (EEG) data in VR using *Unity, MATLAB*, and *Python* to develop standardized processes of data analysis for cybersickness research
- **TCNJ Tutoring Center**, Ewing, NJ
  Tutor *Sept 2023 - Dec 2023*
  - Courses tutored: Data Structures, Discrete Structures, Computer Architecture, Analysis of Algorithms, Operating Systems, Web Design

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

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

Links and more detailed information on these and other projects can be found at elliotbtopper.com.

Honors and Awards

TCNJ Computer Science Dean's List (Fall 2021 - Fall 2024); 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*

Leadership Positions

- **TCNJ Japanese Student Association**, Ewing, NJ
  President (100+ members, 10 board members, over 25 events) *Apr 2024 - Present*
  Treasurer (managed a $30,000 budget) *Apr 2023 - May 2024*
  Fundraising Co-Chair (fundraised over $1,800) *Apr 2022 - May 2023*
- **Upsilon Pi Epsilon Honor Society**, Ewing, NJ
  Vice President *Sept 2024 - Present*
  Secretary *Sept 2023 - May 2024*