

# Vienna Parnell

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## Education

**Vanderbilt University, Nashville, TN**

**May 2025, anticipated**

Bachelor of Science, Computer Science & Applied Mathematics | Minor: Engineering Management | GPA: 3.86

- Honors: Dean's List 2022-23
- Relevant Coursework: Intermediate Software Design, Program Design and Data Structures, Discrete Structures, Digital Systems
- Programming Languages: C++, Java, Python, HTML/CSS/JavaScript
- Software Skills: JetBrains suite, MS Office Suite, Visual Studio Code, Git, Canva, Adobe suite

## Professional & Leadership Experience

**Program Management & Marketing Intern @ Pure Mentorship**

*January 2023 - present*

- Assist founder in project scheduling, resource management, and Agile delivery of marketing assets in a timely manner
- Devised strategic solutions for outreach with Gantt charts, Trello, and Google Analytics and communicate with a 14-person team
- Boosted mentee interest by 10+ students through strategic outreach solutions using Gantt charts, Trello, and Google Analytics
- Developed a dynamic and visually appealing website utilizing the Wix building platform and Velo API

**IT Committee Board Intern @ Vanderbilt Student Volunteers for Science**

*January 2023 - present*

- Collaborate with board members in Python GitHub environment to maintain a scheduler designed to match 200-300+ student volunteers with local underfunded middle and high schools for daily science lessons and community service events
- Actively contributing to the development of the organization's website from scratch using HTML, CSS, and JavaScript

**Machine Learning Developer @ Vanderbilt Data Science**

*January 2023 - April 2023*

- Collaborate with Vanderbilt Data Institute on the Ancient Artifacts repository, a project aimed at conducting micro-debitage analysis to classify artifacts from a Guatemalan stone knapping site by their dimensions and most likely locations of origin
- Provided a comprehensive overview of code structure and use-cases for the repository for stakeholders and developers
- Learned principles of ML and R to accurately document a random forest classification module

**Cohort Advisor & Alumni Advisory Board Member @ Pioneer Academics**

*November 2022 - present*

- Advise four six-scholar cohorts annually in navigating high-level STEM research, college applications, and time management.
- Coordinate with scholars, administration, and professors via Asana and the Schoology LMS to manage sessions
- Facilitate panels of 60+ current scholars on conducting research, college readiness, and building professional relationships

**Podcast Co-Host: Hot Girl Tech**

*October 2022 - present*

- Co-host and co-creator of a biweekly podcast featuring conversations about our personal experiences as aspiring women-identifying engineers and discussions of computer science introductory topics
- Release 15-30-minute episodes on Spotify, consistently reaching 20-30+ listeners per episode, with a peak at 100+

**Vanderbilt Engineering Council Board: Incoming President of Public Relations**

*October 2022 - present*

- Selected as one of six members on the E-Council executive board, representing an engineering student body of 1000+ students through weekly newsletters, coordination with the administration, social and networking event planning, and merchandise design
- Organize and execute 4-6 community events and social weeks per semester, effectively managing budgets of \$800-1000 for each initiative by coordinating with engineering club leaders, board members, and catering services

## Academic Projects & Research Experience

**Personal Website Portfolio**

*May 2023 - present*

- Developing and maintaining an interactive personal website portfolio using Visual Studio Code (HTML/CSS/JS) and Git

**Computer Vision Research Scholar @ Pioneer Academics**

*July 2021 - September 2021*

- Researched deep learning algorithms for facial emotion recognition under the guidance of Prof. Susan Fox at Macalester College
- Coded using Python libraries, including OpenCV, NumPy, TensorFlow Keras, and Matplotlib, to build and evaluate a multi-layer network on four diverse micro- and macro-expression datasets: CASME, FER-2013, FERF, and SAMM
- Improved the validation accuracy from 60% to 63% by reducing overfitting and optimizing dropout rates.
- Summarized research findings in a comprehensive 20-page manuscript, exploring the domain of human-machine interaction and expression recognition. The manuscript is available in my portfolio for further reference.

**Exploration of Criminal Justice & Ethics @ Inspirit AI: Criminal Justice**

*August 2020 - November 2020*

- Analyzed deep learning algorithms for criminal relapse rate prediction through the COMPAS recidivism racial bias dataset
- Identified trade-off between interpretability and accuracy in neural networks, with achieved accuracy ranging from 67% to 74%
- Presented to 500+ scholars on the risk of human error in the legal system due to the lack of interpretability in NN models

**Research: Miniature Origami-Inspired Robotics for Biomedical Applications**

*June 2020 - April 2021*

- Designed ingestible 2in. x 2in. mobile robot for the removal of inadvertently swallowed button batteries in the stomach
- Modeled using Blender and SketchUp Layout and tested the prototype in bodily environment synthesized from polymer mold
- 2nd award at Synopsys Sci. & Tech. Championship, recognized by San Jose Mayor and City Council for STEM achievements