



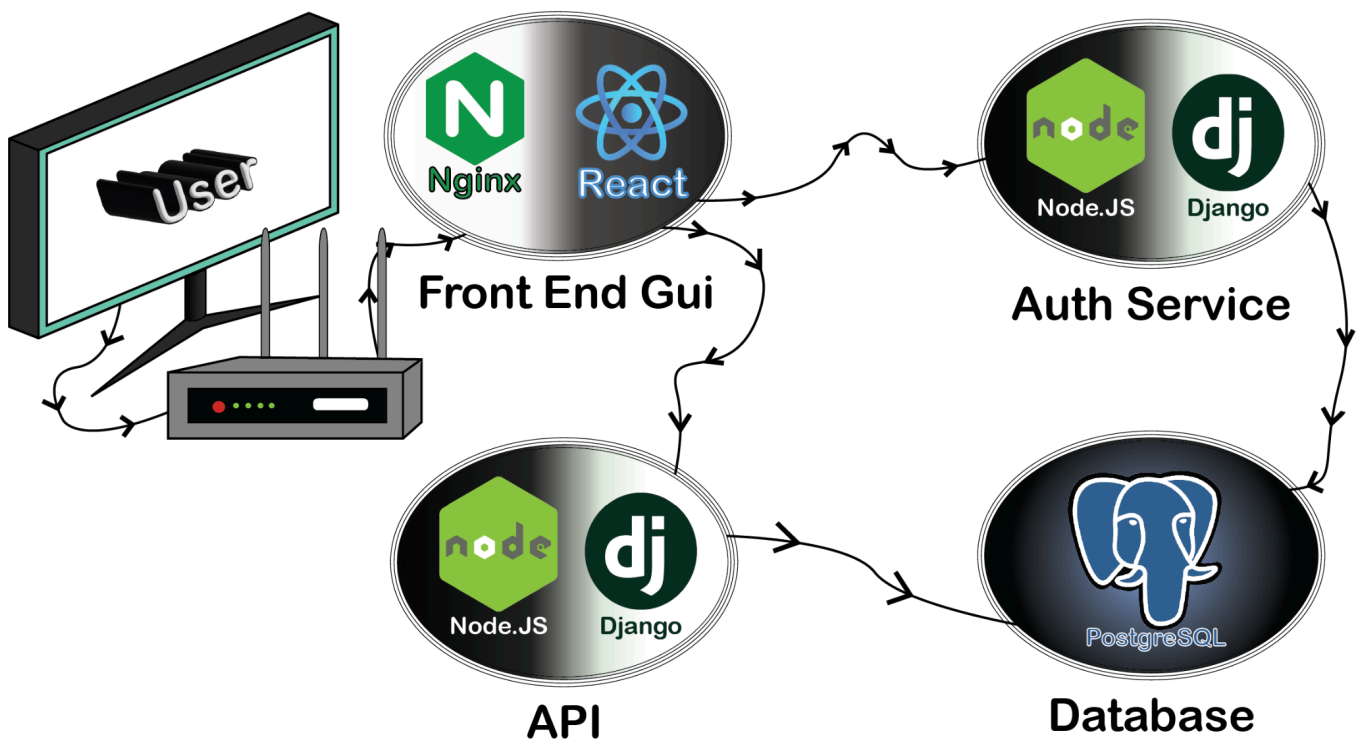
Nooh Hashmi, Demetrius Semanko, Jay Vasquez-Barreto, Evan Visalli

## Chapter 1

Though the era of Telnet-accessible forums is long behind us, we at Strata Labs felt that the current browser-based forum space was either too feature-rich, too unmoderated, or too specialized. The likes of Reddit, 4chan, and Stack Overflow all offer unique end-user experiences, but they all come with their own downsides. Going forward with our project, we want to create a simple forum space that allows for posts and threads to be created, where users post replies to the post itself or to other users' post-replies. This will create a dynamic, communicative experience for our users to share messages, news, or information.

Users will be able to create an account with a username and a password in order to access the forum. Posts and replies created by the user will be stored in a database and can be accessed at any moment by the user. User authentication will be required in order to access the user's account on the forum and to view the internal forum posts to prevent crawling. Out of other forum platforms we wanted something that is simpler and moderated, an alternative to the average complicated forum page.

There are four main components in the architecture. A **front-end GUI**, an **API service**, a **user authentication protocol**, and a **database**. The front-end GUI will make calls to the user authentication protocol, and it will make calls to our API service for database read/writes; posting to the forum in all manners will be facilitated with the API service. User authentication will handle the user registration, logins, and session management. The database will store user profiles, user posts, user replies, and users' encrypted login credentials. The database can only be accessed via the API and user authentication services, but the user will be limited in which API calls they can make.



## Chapter 2

We propose the following in order to implement our vision: our front-end web GUI will be built with React in conjunction with Nginx on Linux; our authentication service, built with Node.JS and Django, will process requests between the front-end and the database regarding user security, and it will be running on a Linux image; our database will be built using PostgreSQL and an official Docker image; finally, our API service, which will handle the majority of traffic- posts and replies- will be built using Node.JS and Django. All of these will be containerized Docker images, and they will be hosted on CloudLab.

Nooh will build our front-end web GUI, Demetrius will be responsible for the API service, Evan will implement our authentication service, and Jay will construct the database. We expect to have the individual components finished by Week 7, 3 March. We will have the entire project finished by Week 15, 28 April.

# Demetrius Semanko

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## EDUCATION

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### West Chester University

*Bachelor of Science in Computer Science*

West Chester, PA

August 2023 – May 2027 (Expected)

- Current GPA: 4.0
- Dean's List: Fall 2023, Spring 2024, Fall 2024
- Honors College

## SCHOLARSHIPS & AWARDS

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### West Chester Programming Contest (WCPC), West Chester University

- 2nd among 16 contestants at the 10th WCPC October 2024
- 1st among 36 contestants at the 9th WCPC April 2024
- 1st among 39 contestants at the 8th WCPC March 2024
- 2nd among 36 contestants at the 7th WCPC November 2023

### Dr. Charles A. Garber Scholarship, West Chester University

- Awarded for having high GPA as computer science major and needing financial assistance June 2024

### Academic Excellence Scholarship, West Chester University

- Awarded for academic excellence in high school May 2023

### Code Lower Merion (CodeLM), Susquehanna International Group

- 2nd among 11 schools at the 5th CodeLM March 2019

## COURSE PROJECTS

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### CSC 240 (Computer Science III), Java

Fall 2024

- Implemented a singly linked list data structure for tracking simple parabolic motion, 180 lines
- Implemented evolutionary symbolic regression for finding line of best fit, 809 lines
- Processed the lynching data of *The Red Record* by Ida B. Wells, 831 lines

### CSC 231 (Computer Systems), Java

Fall 2024

- Reverse engineered from C object file to C source code, 28 lines

### CSC 142 (Computer Science II), Java

Spring 2024

- Home field advantage analyzer with a dataset of 28,689 basketball games from 2017–2018 season
- Hangman game
- Flesch reading-ease score calculator
- Rock, paper, scissors game

### CSC 141 (Computer Science I), Python

Fall 2023

- Statistical analysis of an array
- Single-operation calculator

## PERSONAL PROJECTS

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### Java

- Text-based Blackjack game, 374 lines July 2024
- Card game base package, 252 lines June 2024

## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++

**Developer Tools:** Visual Studio Code, Eclipse JDT, Code::Blocks

**Operating Systems:** Microsoft Windows 10/11, Linux CLI

**Platforms:** ServiceNow, Microsoft Azure AD

**Software:** BeyondTrust Remote Support

**Maths:** Calculus I, Introductory Statistics

## RESEARCH

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### Plants and Pesticides

August 2019 – December 2019

Research assistant for Dr.Vishal Shah of Biology at WCU as a HS student

- Treated plants with different pesticides
- Monitored plants for insect presence

## EXPERIENCE

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### Help Desk Agent

May 2024 – Present

*West Chester University*

West Chester, PA

- Acted as first point of contact for help desk consultations

### Lot Attendant

March 2021 – March 2022

*AutoLenders*

Exton, PA

- Organized, managed intake of new vehicles
- Prepared cars for exchange, customers

### Shift Lead

September 2020 – March 2021

*Wayback Burgers*

West Chester, PA

- Received and fulfilled customer orders, requests
- Maintained premises' front- and back-end

# Nooh M. Hashmi

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Eagleville | PA | 19403 | 484-619-9683

## EDUCATION

West Chester University of Pennsylvania – 700 S High St, West Chester, PA

*Bachelor of Science, Computer Science*

Graduation: December 2025

Selected Courses: Computer Science I, Computer Science II, Computer Science II, Computer Systems, Software Engineering, Game Development, Business and Professional Speech

## EXPERIENCE

UNIQLO, King of Prussia, PA

August 2024 – current

### *Sales Associate*

- Curated customer transactions at cashier including, sales, returns, exchanges, and price adjustments, while accurately handling cash, when receiving payment and giving change
- Thoroughly worked with my team members to make sure the sales floor was fully stocked and neat for the best customer experience
- Actively helped customers with problems, guiding them to items they want, and our fitting room or registers, helping customers out with self-checkout, and giving advice on how the clothing looks on the customer

AMERICAN READING COMPANY, Bluebell, PA

June 2019 – August 2023

### *Warehouse Associate, Assembly*

- Contributed to the mission of ARC, an organization that strives to improve entry-level English and Spanish education through curriculum, assessments and learning partnering with 5,320 schools, 1,070 districts and 50 states
- Efficiently worked with other warehouse members in getting items off shelves and packing them to get ready for the next department to ship out
- Effectively learned what to do in different departments where help was needed so everything could perform smoothly, for example, Learned how to pack a work order, and shelved books after they were received.

## School Involvement

West Chester Programming Competition (WCPC)

- Competed to complete 4 different programming problems the fastest
- Completed coding questions, for example changing strings to ints, and going through and array to arrange it in a specific order

## **Class Experience**

### **Game Development**

- Efficiently used GODOT to create video games
- Worked with GODOT's own Programming language GD script
- Created Projects in the classes text book and for the projects improved upon them in our own unique ways
- Collaborated with 3 or 4 other members to create our own idea as a playable video game

### **Software Development**

- Learned the basics of software development
- Implemented all techniques that were learned to complete the homework that was assigned
- Gained the ability to create HTML diagrams and create and read flowcharts
- Learned and implemented Run-Time Polymorphism, Refactoring, and how to move certain lines of code from one file to another

### **Computer Systems**

- Created programs in C to learn how the computer operates
- Gained knowledge on the basics of how to use nano and Command Prompt
- Used Command Prompt to move, edit and create files and directories
- Learned about the different hardware of computer

### **Computer science I, II, III**

- Sharpened my knowledge on Java
- Learned how to use Arrays, lists, queues, stacks
- Gained experience using and creating Trees
- Learned Basic and complex concepts of coding and java

## **Projects**

- Stone Bridge Treasure Heist, Game Development Team Projects 1
- Hoard Rush, Game Development Team Project 2
- Assignments 1, 2, 3, 4, Software Engineering
  - Used the many topics talked about to complete the code given

## **SKILLS**

Software: Microsoft Word, Excel, PowerPoint, JGrasp, Visual Studio Code, Godot

Programming Languages: Java, C-code, Gd script

# Jhan Vazquez-Barreto

[JV966821@wcupa.edu](mailto:JV966821@wcupa.edu)

## **EDUCATION**

**West Chester University of Pennsylvania**, West Chester, PA  
Bachelor Degree in Computer Science

- GPA: 3.5

**Millersville University**, Millersville, PA  
Major: Computer Science, August 2022 – May 2023

**Delaware County Community College**, Media, PA  
Associate degree in Liberal Arts, August 2020 – August 2022

## **Course Experience**

**CSC 240**, Computer Science III - Java. Fall 2024

- Specialized in Object-Oriented programming involving complex programs.
- Initialized a circular linked list data structure to store data for a hotel managing system.
- Implemented a text processing program that collected and formatted data from *The Red Record* by Ida B. Wells.

**CSC 231**, Computer Systems. Fall 2024

- Acquired skills in understanding components of CPUs, memory, storage, networking, and operating systems.
- Reversed engineered in assembly language back to C language.

**CSC 220**, Foundations of Computer Science. Spring 2024

- Developed algorithmic thinking in computational logic.
- Initialized complex finite-state machines.

**CSC 142**, Computer Science II. Spring 2024

- Implemented core logical thinking for problem solving.
- Studied primitive types and strings inside an array.
- Initialized sorting and searching in an array.
- Introduced to objects and classes.

**CSC 301**, Computer Security & Ethics. Fall 2024



- Developed skill in creating secure systems.
- Developed understanding of cyber attack methods and defenses.

### **Personal Project**

#### **Database Structure**, December 2024

- Implemented a complex singly linked list data structure that allows for large amounts of data to be stored.

### **Technical Profile**

**Languages:** Java, Python, C, Racket, some assembly

**Software Tools:** Visual Studio Code, Eclipse IDE

**Operating Systems:** Linux, Windows

**Relevant Courses:** Discrete Structures, Calculus 1, Calculus 2, Intro to Statistics

### **Work Experience**

**Giant Food Company**, Kennett Square, Pa

Replenish associate, July/2021 – Present

- Replenish stock and complete tasks in a timely manner
- Specializes in leading team work
- High drive in customer experience
- Prospers in communication skills

**Lowe's Companies Inc.**, Avondale, Pa

Seasonal Garden Associate, May/2021 – July/2021

- Provided aid towards difficult tasks involving customers, and coworkers with care
- Sufficed in one-to-one customer service
- Drove department sales
- Collaborated successfully with other store departments

# Evan Visalli

Junior  
Undergraduate  
Student

## Contact

### Address

325 Winding Way Glenside,  
PA, 19038

### Phone

(267) 625 5982

### E-mail

21evisalli@gmail.com

## Skills

Adobe Illustrator, Adobe  
Photoshop, GitHub, VSCD

Eclipse, Java, Visual  
Studio, C

Word, Excel, Google Docs,  
Google Sheets, Google  
Slides, Microsoft Office

## Education

### Bachelor of Science: Computer Science

*West Chester University – West Chester, PA, Anticipated Graduation  
June 2026*

- GPA: 3.06
- Transferred from Montgomery County Community College – May 2023

## Work and Project Experience

### Customer Service Associate

*Wawa Inc, Glenside, PA, May 2022 – Present*

- Exhibited key company values to efficiently perform tasks and deliver reliable and friendly customer service.
- Ensure exceptional customer service by maintaining professionalism and patience by putting the customer first.
- Demonstrate the ability to remain organized in a fast-paced environment by establishing effective time management skills.
- Maintain back-end and front-end facilities by effectively keeping products stocked and organized.

### Text Processing Project

- In this project me and a group of others were tasked with creating a program which would filter out spam emails from a csv file filled with emails. The filtering algorithm created used the Euclidean Distance to calculate how similar the target email was towards the three closest already calculated emails. The target emails value will be checked against the closest 3 emails values and the target email will then be marked either spam or not spam depending on whether there are more spam or not spam emails closer to the target emails value.

## Coursework

- Computer Science I, II, III
- Computer Systems, Foundations of Computer Science
- Computer Security & Ethics
- Data Structures & Algorithms
- Data Communications and Networking I
- Introduction to Cloud Computing
- Statistics 1, Intro to Statistics 2
- Calculus I
- Fundamentals of Algebra
- Introduction to Discrete Mathematics
- Business and Organizational Writing
- Digital Media

## Activities

- Orchestra, Cheltenham School District, 2013-2021
- Tennis, Cheltenham School District, 2017-2021
- Ski and Snowboard Club, Cheltenham School District, 2017-2021
- Ski and Snowboard Club, West Chester University, 2024 - present

## Honors and Awards

- Transfer Recognition Scholarship, West Chester University, September 2023
- The Mitchell Levin Exemplary Student Award, 2017

## Hobbies

- Listening to music
- Playing Video Games
- Researching new parts for computers
- Looking into new technologies and how they function
- Cooking
- Reading books / Comics / Manga