

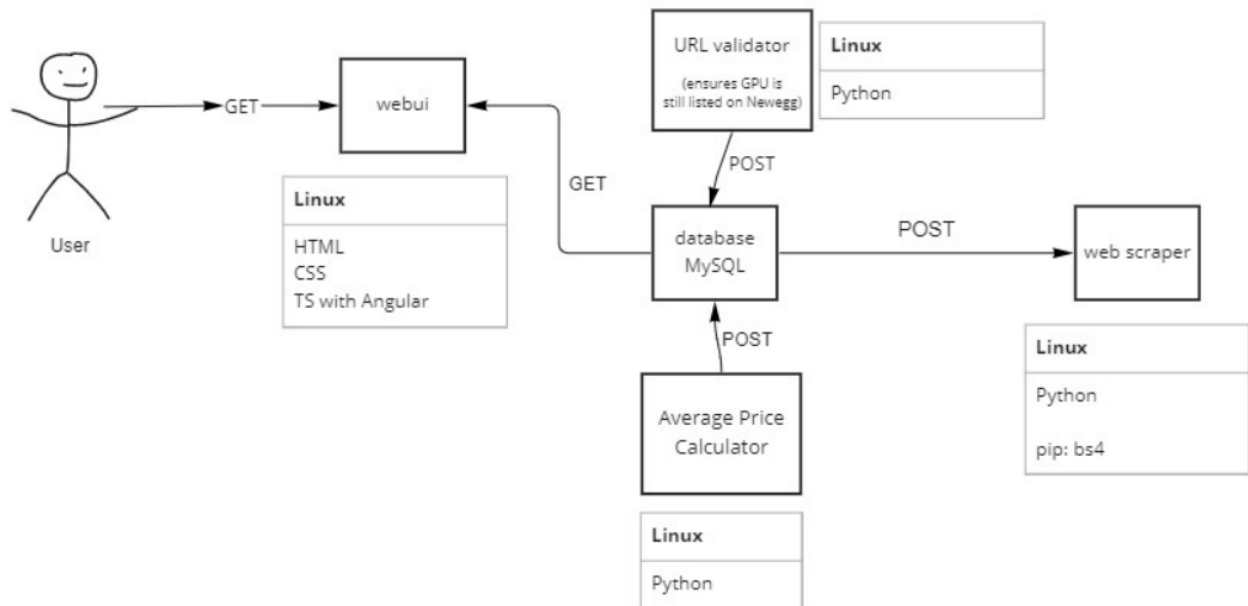
# User-Interfaced Price Checker

Dylan Aegbuniwe, Justin Baksi, Justin Ching,  
Shaun Derstine, Shepherd Shenjere

## Summary

This project is meant to serve as a price checker and lister for products found on Newegg.com. A user interface will ask users to sign into an account or make an account to be able to access the product finder. Products from Newegg will be findable through this, listed through a MySQL database. Users will be able to make lists of items they want to keep an eye on for future visits to monitor prices and those will be saved to their profile name.

# Chapter 1



# Chapter 2

Our group's mission is to deploy a WebUI interface that permits the user to create login information if they haven't made one already, or log back into an account with a username and password that they have already created. The individual usernames and passwords submitted would be saved to a MySQL database to permit future access to the same account and to also allow multiple users to operate from the same machine should one log out. With these created profiles, users would be able to make lists of searched items gotten through our webscraper for future reference. The webscraper is a Python-created script that runs, finds, and updates prices of items found on Newegg.com. If the user wishes to save an item to a list so they can monitor the price, they would be able to save it to a list which would save to a MySQL database attached to the profile that that can be accessed again later. Along with this, there would be an average price calculator made in Python to get the average price of every group of a certain item (currently it is GPUs) and display how that GPU price changes after each week. There is also a URL validator included that ensures each item searched is still listed on Newegg. The URL validator attempts to visit the stored URLs from the MySQL database where each items' information is stored and if the URL doesn't work, the item is removed from the database. User input is the main driving force of the user-interfaced webscraper. User input is necessary for the login to see the webscraped items from Newegg and the ability to save items to a specified list tied to that account.

# Chapter 3

So far in our efforts, we have gotten a webscraper in Python up and running that saves and updates data over to a MySQL database. Each item is saved line by line with different variable information like name and price attached to it. We also have preliminary workings of the WebUI interface worked out in angular that is still being developed for the project. With the webscraper, currently it is only grabbing the names

and prices of GPUs from Newegg and sending them to the MySQL database. We're currently unsure if we will change this or rebrand the webscraper to be done as a GPU price checker since that is more relevant to computer users who build PCs or are looking to change out parts in their own systems. We're also still trying to determine the best course of action for deploying everything up for docker/Kubernetes. As we continue to develop what we have, we feel as though the implementation into docker/Kubernetes will come more smoothly. This also goes for the MySQL databases used for storing login information through WebUI interface input. It is not fully setup yet, though it will come together once we have a bit more information to work with in a more complete WebUI structure. The URL validator and average price calculator are newer additions that we feel will help our model overall and we are looking to implement them as soon as possible.

# Dylan Aegbuniwe-B.Sc

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## EDUCATION

### **West Chester University of Pennsylvania**

*College of Sciences and Mathematics* • Bachelor's Degree in Computer Science

Applied Statistics Minor

Computer Security Certification

Expected Graduation: May 2022 • Current GPA: 3.515

## SKILLS

- Adobe Premiere Pro, Acrobat, After Effects
- Microsoft Office 365 (Word, Access, PowerPoint, Excel, Outlook, OneDrive)
- OBS studio, Stream Labs, Audacity
- JGrasp, NetBeans, Visual Studio code, PowerShell Scripting, GitHub
- C Programming, Java, Python, Linux, Bash scripting, Ubuntu server, Virtualization, VMware
- Linux Administration
- Videography, Film, Video editing, Sound Engineer
- Team Management

## EXPERIENCE

### **Rutter's • Loganville, PA • Team Member – Deli • June-October 2017**

- Made and prepared food in the deli

### **Team Member – Retail**

- Provided quick customer service and performed maintenance
- Performed on the store, cleaning areas of the shop the store floor and bathrooms

### **Wal-Mart • East York, Pennsylvania • Front-End Host • June 2018-January 2020**

- Provided customer service and checked out customers at cash registers and self-checkout registers in one of the largest Wal-Mart stores in Pennsylvania
- Trained front-end hosts

## EXTRA-CURRICULAR ACTIVITIES

### **Dallastown Football • 2013-2016 • Offensive and Defensive Lineman**

### **Dallastown Boys Volleyball • 2015-2018 • Defensive Specialist, Libero, and Manager**

- Assisted coaches and players with practice and supported the team before, during, and after games throughout each year

### **Dallastown Video Club • 2016-2018 • Member**

- Videographer and Sound Engineer
- Fundraising Coordinator and Event Planner

### **Dallastown Link Crew • 2016-2018 • Leader**

- Led group sessions on life skills and tips

### **West Chester University Computer Security Club • 2019-Present • Member**

- Participated in meetings learning about different topics in the field of computer security

# Justin Baksi

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Aston, PA  
215-908-4626  
JB904055@WCUPA.edu

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## Education

West Chester University  
Bachelor of Science, Computer Science  
Dean's List, GPA: 3.5

West Chester, PA  
Graduation: May 2022

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## Experience

### Prime Technologies Inc. / Software Engineer Intern

October 2021 - PRESENT, Exton, PA

- Maintain AWS web application using Java and Grails with Gradle.
  - Deploy client software on EC2 instances.
  - Set up Route 53 domains for each client.
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## Technical Skills

- Proficient Object-Oriented Programming in Java, Python, C#, Groovy.
  - Familiar with C/C++, SQL.
  - Machine Learning in Python.
  - Big Data Engineering with Python.
  - Experience with AWS (EC2, Route 53, SSH).
  - Windows, Linux.
  - Git
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## Projects

- Used Support Vector Machine to predict survivors of the Titanic (Kaggle dataset) with 75% accuracy.
  - Used min-hashing algorithm to determine similarity between presidential speeches.
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## Relevant Coursework

Data Structures and Algorithms, Software Engineering, Advanced Topics in Object-Oriented Programming, Computer Systems, Database Management, Big Data Engineering, Cloud Computing (Spring 2022)

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## Hobbies/Activities

WCU Computer Science Club, Vice-President of the WCU Outdoors Club, building gaming PCs, investing, guitar playing, astronomy, golf, ice hockey

## Justin Ching

justinching03@gmail.com • (484) 949-4591 • Downingtown, PA

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### WORK EXPERIENCE

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#### West Chester University IS&T Help Desk

May 2021 – Present

*Help Desk Consultant*

*West Chester, PA*

- Provided assistance to students, faculty, and staff with technology-focused services, such as resolving network and software errors, providing students with the necessary information for transcript requests, aiding faculty and staff with equipment loans and purchases, and installing various software and tools onto approved devices.
- Performed basic troubleshooting and repairs for faculty and staff with university-provided equipment, primarily working with Lenovo ThinkPad laptops, MacBook Airs and MacBook Pros, Lenovo ThinkPad docking stations, and a variety of monitors.

#### Next Generation Technologies, Inc.

May 2019 – August 2019

*Intern*

*Philadelphia, PA*

- Updated the user interface of the company's website using PHP in conjunction with Joomla, while adding additional functionality to domain purchases and DNS name changes by integrating OnlineNIC API.
- Maintained the company's database using JDatabase and SQL, reorganizing how data was stored and what information could be read from the various databases.

#### Target Corporation

Sep. 2019 – Present

*Guest Advocate*

*Exton, PA*

- Assisted customers with locating products within the store, processing returns, exchanges and online orders, pushing new items from the storage area and backstocking any items that had no store location or was unable to go within their designated area.
- Trained new team members across the various front of store roles, focusing on getting new members adjusted to the store's service desk, where item exchanges, returns, and online orders occur, and guiding those with night shifts with the store's closing procedures.

### EDUCATION

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#### West Chester University

Current Student

*Pursuing Bachelor's Degree in Computer Science*

*West Chester, PA*

- 3.83/4.00 GPA

### SKILLS

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- **Skills:**
  - **Technical Skills**
    - Proficient with: Java • C++ • JavaScript with Node.js and MongoDB • Microsoft Office Suite (Excel • Word • PowerPoint)
    - Familiar with: Python • C • PHP • SQL • HTML • CSS5
  - **Soft Skills**
    - Public Speaking • Written communication • Resourcefulness • Troubleshooting

# Shaun Derstine

Undergraduate Computer Science Student

West Chester, PA

(267) 772-9418

shaunderstine@gmail.com

## Career Objective

Graduating computer science student at West Chester University looking to learn new skills and improve upon existing ones through hands on experience in the industry.

## Education

**West Chester University of Pennsylvania** | West Chester, PA

Bachelor of Science in Computer Science, May 2022

Minor in Applied Statistics

GPA: 3.679, *Dean's List* 5 semesters

## Relevant Coursework

- Data Structures & Algorithms (Java)
- Operating Systems (C and Unix)
- Programming Languages & Paradigms (Haskell)
- Software Engineering (Agile Methodologies)
- Intro Cloud Computing (Deployment on Cloud Infrastructures)

## Work Experience

*Busser* | September 2021 – Present

*Cheesecake Factory* | King of Prussia, PA

- Coordinate with servers and other bussers to manage the floor efficiently

*Computer Science Tutor* | January 2020 – May 2020

West Chester University of Pennsylvania | West Chester, PA

- Organized regular meetings and review sessions via email, text, and phone call
- Created personalized plans for each session
- Led both individuals and groups of up to five students

## Projects

*Develop and deploy full-stack application on cloud infrastructure (in progress)* | Create a web app that enables users to track price history of products listed on newegg.com

- Created and launched compute instance on OpenStack
- Configured web server using nginx
- Built web scraper to track products using Python
- Use HTML, CSS, and JavaScript to create interactive web UI
- Create database with MySQL

*Machine Learning Project (in progress)* | Retrain VGG16 to recognize ASL and test model to see its effectiveness

- Build, train, and evaluate VGG16 model using Tensorflow

## Technical Skills

- Java
- Python
- Haskell
- C
- Linux/Unix
- Git

## Soft Skills

- Leadership and management qualities
- Collaborative team skills
- Excellent written and oral communication
- High level problem solving abilities
- Strong attention to detail
- Creativity

## Certifications

*Computer Security (in progress)*

West Chester University

Expected Completion: May 2022



## SHEPHERD SHENJERE

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Folsom, PA  
<https://www.linkedin.com/in/shepherd-shenjere-12974b15b/>

### EDUCATION

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#### **West Chester University**

#### **West Chester, PA**

*Bachelor of Science in Computer Science*

May 2022

Cumulative GPA: 3.63

#### **NSA Cyber Security Certificate**

May 2022

#### **Delaware County Community College**

#### **Media, PA**

*Associate in Applied Science, Network Engineering*

May 2019

Cumulative GPA: 3.50

### RELEVANT COURSEWORK

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Computer Science III

Data Structures & Algorithms

Computer Security & Ethics

Cloud Computing

Software Engineering

Computer Systems

Data Communications & Networking

Programming Language Concepts/Paradigms

## SKILLS

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**Programming Languages:** Python, Java, Haskell, Html, CSS

**Certifications:** Certified Test Out Server Pro 2016: Install and Storage, Install and Configure

**Tools:** Microsoft Excel, Microsoft Word, Outlook, Microsoft PowerPoint, Visual Studio, IntelliJ, Dia

## EXPERIENCE

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### **Randstad at Vanguard**

Malvern, PA

*Financial Processor*

September

2019-June 2021

- Processed client's transaction requests and reviewed transactions for accuracy, completeness, and adherence to all internal and external regulations
- Partnered with Vanguard Associates in working through complex processing issues to ensure timely completions
- Developed a working knowledge of Vanguard's processing systems, group policies and procedures

### **TEKsystems at Wallingford School District**

Wallingford, PA

*Helpdesk Support Specialist*

June 2019-

September 2019

- Troubleshoot issues for school-approved software packages including Exchange and Google Apps for Education
- Software installations and upgrades, firmware updates, virus scans, end-point updates
- Identified, researched, and resolved technical problems quickly and efficiently

### **Delaware County Community College**

Media, PA

*Helpdesk Support Intern*

January 2019-May 2019

- Provided remote troubleshooting through diagnostic techniques and pertinent questions
- Imaged computers, installed and updated new software
- Assembled new machines and disassembled old machines
- Provided accurate information on IT products or services