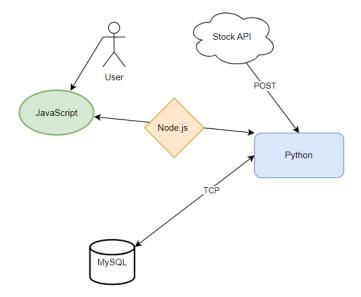


West Chester University

Stephen Caliendo, Brian Giovinazzo, Brandon Kohler, Julia Kush & Jacob Peterson

**Chapter 1: Team's Vision** 



The idea behind this application is to make finance more personal. Giving individuals one place to manage stocks and complete transactions. In the above design diagram, you can see for our WebUI, it will be developed with JavaScript and will talk to our Python script through Node.js. Our database will talk to our Python script. Our web interface will depend on the Python script to gather information from the database. The Api is from Financial Modeling Prep and it is able to give us information such as data metrics and price data from 5yrs ago.

### **Chapter 2: Purpose**

Our project's goal is to leverage our react.js-coded WebUI to display information about our users' accounts, including the stocks they presently possess and their entire market worth. The customer will have the option to look up certain stocks and choose whether to buy or sell specific assets. The key thing we aimed to achieve was the ability for a user to sell a portion of their share in order to utilize it as a debit card while making a transaction. Our Python workers will manage the modifications to our database and ensure that they can be seen in the WebUI in order for everything to operate properly. Our frontend will come next, and it will be relatively simple so that it can be user-friendly and the user won't have any trouble navigating the website. The most recent prices and quarterly reports on specific metrics will be obtained through a Web API and will be useful to users when deciding whether to buy or sell a stock. We will save user information in our database, including user name, password, stock holdings and buy price.

### **Chapter 3:**

### Worker:

The worker is the heart of this application and with that the worker is going to do all of the work behind this application. The worker is split into multiple classes with each of them ensuring things are working properly. To start off we want to first get the data of the most recent price and to do this we are going to look at the get\_stock\_quote method.

```
def get_stock_quote(ticker):
    url = f"https://financialmodelingprep.com/api/v3/quote-short/{ticker}?apikey={api_key}"
    response = requests.get(url)
    if response.status_code == 200:
        data = response.json()
        return data
    else:
        print(f"Error: {response.status_code}")
```

We are trying to get data from this url. We imported the requests library to make this process happen, For the application we wanted the user to request information on a specific stock.

### Portfolio Value:

We want to get the portfolio value of all of the properties that are in our portfolio. We want to cycle through each of the names and the quantities of all of the items in the user's portfolio to generate total portfolio valuation.

```
def get_portfolio_value(self):
   total_value = 0
   for ticker, quantity in self.portfolio.items():
        quote = EquityValue.get_stock_quote(ticker)
        if quote:
            price = quote[0]['price']
            total_value += price * quantity
        print("Total Portfolio Value:", total_value)
```

### **Stock Transaction:**

We wanted to give the user the ability to buy and sell shares of stock in there portfolio. We start to tie everything together in our execute method.

```
def execute(self):
    time = datetime.now()
    quote = EquityValue.get_stock_quote(self.ticker)
    ratio = EquityValue.get_stock_ratios(self.ticker)
    wallet_balance = cursor.execute("SELECT Wallet_Balance FROM User WHERE User = "+self.user)
    if not quote:
        return
    price = quote[0]['price']
    print(ratio)
```

If the user decides to go with buying more shares of an individual stock it will ask the Equity Value Class what is the most recent price that AAPL is trading at. If the user decides to buy or sell, the database would then update the properties in the user's portfolio.

```
if self.transaction_type == "buy":
    cost = price * self.quantity
    print(f"Bought {self.quantity} shares of {self.ticker} at ${price:.2f} each, for a total cost of ${cost:.2f} at {ti
    self.port_value.update_portfolio(self.ticker, self.quantity)
    cursor.execute("UPDATE User SET share_holdings = "+self.ticker+" WHERE User = "+self.user)
    mydb.commit()
    cursor.execute("UPDATE User SET buy_price = "+(price)+" WHERE User = "+self.user)
    mydb.commit()
    cursor.execute("UPDATE User SET Wallet_Balance = "+(wallet_balance - price)+"WHERE User = "+self.user)
    cursor.execute()
    mydb.close()
```

Properties in the database that would be changed after Self.Transaction

- Wallet Balance
- Portfolio
- Portfolio Valuation

## **Money Transfer:**

As a team we thought it would be beneficial that your cash in your portfolio would be able to be used with your peers for your everyday expenses.

```
class MoneyTransfer:
    def MoneyTransfer (User1,User2,TransferAmount):
        # Takes the amount in Users Wallets
        User1Wallet = cursor.execute("SELECT wallet_balance FROM user_info WHERE user = '"+User1+"';")
        User2Wallet = cursor.execute("SELECT wallet_balance FROM user_info WHERE user = '"+User2+"';")

# Updates the value in User1 Wallet (sender)
        cursor.execute("UPDATE user_info SET wallet_balance = "+(User1Wallet-TransferAmount)+"WHERE user = '"+User1+"';")

# Updates value in User2 Wallet (receiver)
        cursor.execute("UPDATE user_info SET wallet_balance = "+(User2Wallet-TransferAmount)+"WHERE user = '"+User2+"';")
        mydb.close()
```

### **Database:**

The start off we first needed to create our database. From there we created two separate tables stock\_info and user\_info. We then created two more scripts to enter values into these two tables.

```
1
  2 USE `STOCKS`;
                                                                                                                                                                                                                                                                            1 CREATE DATABASE TE NOT EXTSTS "STOCKS":
  3 GO
                                                                                                                                                                                                                                                                            2 GO
  4 CREATE TABLE `stock info` (
                                                                                                                                                                                                                                                                           3 USE `STOCKS`;
  5 stock name varchar(100) NOT NULL,
   6    recent_price varchar(50) NOT NULL,
                                                                                                                                                                                                                                                                           5 CREATE TABLE `user_info` (
                 `purchase_price` varchar(50) NOT NULL,
   7
                                                                                                                                                                                                                                                                                            `user` varchar(100) NOT NULL,
                 `10_day_price` varchar(50) NOT NULL,
   8
                                                                                                                                                                                                                                                                                          `password` varchar(50) NOT NULL,
                  `monthly_price` varchar(50) NOT NULL,
  9
                                                                                                                                                                                                                                                                                          `wallet_balance` varchar(50) NOT NULL,
                    `quantity` varchar(50) NOT NULL,
 10
                                                                                                                                                                                                                                                                                               `share_holdings` varchar(50) NOT NULL,
                    `purchase_date` varchar(50) NOT NULL,
11
                                                                                                                                                                                                                                                                                           `buy_price` varchar(50) NOT NULL
12
                      `sell date` varchar(50) NOT NULL,
                                                                                                                                                                                                                                                                          11 );
              `todays date` date
13
                                                                                                                                                                                                                                                                          12 GO
14 );
15 GO
  INSERT INTO `stock_info` (`stock_name`,
                                                                                                                                                                                                                                                                             1 INSERT INTO 'user_info' ('user',
                                                                                                                                                                                                                                                                                           'password'.
                                                                                                                                                                                                                                                                                         'wallet balance'.
        'monthly_price',
       'quantity',
'purchase_date',
'sell_date',
                                                                                                                                                                                                                                                                                          `share holdings`,
                                                                                                                                                                                                                                                                                          `buy_price`)
       'todays_date')
                                                                                                                                                                                                                                                                       8 ("Julia Kush", "gorams", "1000", "Apple", 250),
9 ("Brandon Kohler", "gorams", "2300", "Microsoft", 200),
     VALUES

("Tesla", "199", "195.86", "200", "205", "1", "2/24/2023", "3/29/2023", curdate()),

("Microsoft", "230", "283.34", "233", "244", "1", "1/14/2023", "3/19/2023", curdate()),

("Johnson & Johnson", "163.99", "133.44", "145", "187", "1", "1/09/2023", "2/28/2023", curdate()),

("Apple", "164", "162.40", "159", "155", "155", "11/14/2022", "3/19/2023", "curdate()),

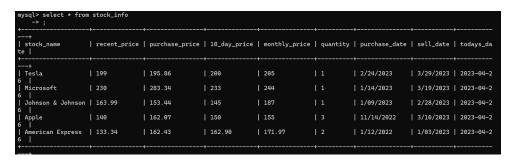
("American Express", "133.34", "162.43", "162.90", "171.97", "2", "1/12/2022", "1/93/2023", curdate());
                                                                                                                                                                                                                                                                       10 ("Brian Giovinazzo", "gorams1", "1500", "Johnson and Johnson", 180),
                                                                                                                                                                                                                                                                       11 ("Jacob Peterson", "gorams12", "3000", "Tesla", 170),
                                                                                                                                                                                                                                                  11 ("Jacob Peterson", gurdms12, 2000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000, 1000
```

The next step we took was to create a docker file to create our MySQL image from the MySQL base image. We added a copy command to copy the scripts that we used to create our

tables and inserted our data into the tables. We then added environmental variables to be able to get the database we created which is named STOCKS and our MySQL root password. Lastly, we exposed the MySQL port which is 3306.

- 1 FROM mysql:latest
- 2 COPY ./scripts/ /docker-entrypoint-initdb.d/
- 3 ENV MYSQL DATABASE=STOCKS
- 4 ENV MYSQL ROOT PASSWORD=root
- 5 EXPOSE 3306

Lastly, we used this docker file to build our own image for MySQL. During this step, we exposed the MySQL port which is 3306 and we set up a password to be able to connect to our database. Once we were able to connect to our database we were able to see our tables. Here you can see all of the data we inserted from our scripts in our tables.



| <pre>mysql&gt; select * from user_info;</pre>  |  |                                      |  |           |
|--|--|--------------------------------------|--|-----------|
| user   | password   | wallet_balance                       | share_holdings   | buy_price |
| Julia Kush<br>  Brandon Kohler<br>  Brian Giovinazzo<br>  Jacob Peterson<br>  Stephen Caliendo | gorams<br>gorams<br>gorams1<br>gorams12<br>gorams123 | 1000<br>2300<br>1500<br>3000<br>1800 | Apple<br>Microsoft<br>Johnson and Johnson<br>Tesla<br>Google | 250       |

## WebUI & Python:

We decided later on that it would be best if we put our python script into the Node.js server with the Javascript in order to have a more seamless connection. Our Docker file will handle all the dependencies for the components of the Node.js server.

```
FROM node:latest

RUN apt-get update && \

apt-get install -y python3 python3-pip && \
pip3 install pandas && \
pip3 install cufflinks && \
pip3 install numpy && \
pip3 install requests

WORKDIR /usr/src/app

COPY package*.json ./

RUN npm install

COPY . .

ENV PORT 8080

EXPOSE 8080

CMD ["node", "main.js"]

CMD ["python3", "worker.py"]
```

We use the base image for node to start the build, and then we install the python dependencies. Our script utilizes pandas, cufflinks, numpy and requests libraries. Our working directory is then created and copy package.json into the directory. After the dependencies are installed we add the rest of the source and we expose port 8080 and execute main.js and worker.py.

```
"name": "docker_web_app",
    "version": "1.0.0",
    "description": "Node.js on Docker",
    "author": "Peterson Jacob",
    "main": "main.js",
    Debug
    "scripts": {
        "start": "node main.js"
},
    "dependencies": {
        "ejs": "^3.1.3",
        "express": "^4.18.2",
        "express-ejs-layouts": "^2.5.0",
        "http-status-codes": "^2.2.0",
        "child_process": "^1.0.2"
}
```

The file package. json includes all the dependencies for the java script on the Node.js server. We are using all the most recent versions of ejs, express, express-ejs-layouts, http-status-codes, and child process.

## **Chapter 4:**

We have all the Docker images created for the components now we have to make sure that we are able to connect them all on the same docker network.

We created the image for both the worker and MySQL, and then created a container with both of those images:

```
$ docker container ls --all
CONTAINER ID
                          COMMAND
               TMAGE
                                                                     STATUS
                                                                                     PORTS
                                                                                                            NAMES
                                                    CREATED
98139b04db2b
               worker
                          "python -i worker.py"
                                                    6 seconds ago
                                                                     Up 4 seconds
                                                                                                            worker2
                                                                     Up 2 hours
                                                                                     3306/tcp,
ed0c1d9fb5a
                          "docker-entrypoint.s..."
                                                                                               33060/tcp
               sql
                                                    2 hours ago
```

We then interactively went into the worker container's shell and pinged the MySQL container:

```
# ping sql
PING sql (172.18.0.2) 56(84) bytes of data.
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=1 ttl=64 time=0.184 ms
64 bytes from sql.prosperanet (172.18.0.2): icmp_seq=2 ttl=64 time=0.079 ms
```

We then went to the node js container and pinged the sql database on the network:

```
jp923870@head:~/Prospera/database$ docker run -it --net Prosperanet web sh
# ping 2536fdb1a633
PING 2536fdb1a633 (172.18.0.2) 56(84) bytes of data.
64 bytes from mysql.Prosperanet (172.18.0.2): icmp_seq=1 ttl=64 time=0.153 ms
```

All of our components were successfully put on the Docker network and we were able to ping each container in the network.

### Chapter 5:

Our purpose is that through Prospera, users can manage their investment portfolios, track the performance of their investments, and access up-to-date information on a variety of stocks. In addition, Prospera enables users to conduct personalized transactions and sell stocks as a means of funding their everyday transactions.

Each separate component has been completed and is able to run, but we were unable to get all of the components working in harmony. They each had their own containers up and running on docker, but on kubernetes the database and python weren't connecting properly as they were on docker. We think that it has something to do with the database service on

kubernetes, but the MySQL.connector in the python script is not able to find the database on port 3306.

Our web interface heavily depends on the python script to gather information from the database so we aren't able to bypass that issue and we aren't able to display user information to the web ui. Each component met the requirements individually but they didn't as a collective and we weren't able to connect them together.

### Resumes:

### Julia Kush

### Juliaekush@gmail.com

610.937.1614

#### **EDUCATION**

### **West Chester University**

West Chester, PA

Major: BS - Computer Science

Minor: Applied Statistics

Computer Security Certification

## Cardinal O'Hara High School

Springfield, PA *Graudated May 2019* 

### **SUMMARY**

A talented senior majoring in computer science with a focus in cyber security and statistics. I have significant experience with multiple programming languages and advanced mathematical and analytical skills.

### **WORK EXPERIENCE**

### **Universal Health Services**

King of Prussia, PA

Software Engineer - Intern

June 2022 - Present

**CUM GPA 3.75** 

- Generate team project report and open incident report
- Collaborate closely with senior level developers to assist with integrated testing and documentation
- Assist with analysis on larger issues which are used by senior level developers
- Utilize SQL Server Studio to house data for projects
- Create database objects such as tables, stored procedures, and views in SQL Server Studio
- Implement SSIS packages to migrate data from data warehouse to our local data models
- Design end user reports using Power BI and SSRS Reporting tools

### Telco Holdings Inc.

West Chester, PA

Computer Implementation Specialist - Intern

May 2021 – January 2022

- Imaged windows-based computers and Laptops
- Installed applications, VPN, and management software
- Configured user domain access
- Performed testing and configuration validation
- Boxed configured devices and worked in partnership with field deployment services
- Individually contributed and collaborated with managed services desk stakeholders

### Joseph Anthony Retreat Spa

Springfield, PA Spa Attendant

June 2018 - July 2019

- Communicated daily with all suppliers, ensuring proper quantities of products were fresh and delivered timely
- Supported masseuses and management
- Maintained and sanitized SPA
- Replenished stock
- Tear down and set up treatment rooms after each service
- Customer-focused services

#### **SKILLS & CERTIFICATIONS**

### Soft Skills

- Goal oriented, strong networking capabilities, communication and listening skills, team oriented, flexible, time-mangement, creative thinking, organization

### Techinical IT Skills

- Languages: Java, C++, MySql, R, Haskell
- Proficient with Microsoft Suite, R-Studio, Visual Studio, GitHub, J-Grasp, Eclispe, Power BI, SSRS, SSIS, SQL Server Studio
- Honor Roll Spring 2020, Fall 2020, Spring 2021, Fall 2021.

## Brian Giovinazzo

(209) 597-7875 | brian.giovinazzo@gmail.com

http://www.linkedin.com/in/brian-giovinazzo https://github.com/Brian-Giovinazzo/School-Projects

## **Objective**

To obtain a software engineering internship at a company that will utilize my technical skills and knowledge to effectuate impactful improvements in our world while fostering self-development.

### **Skills & Abilities**

- Software: Java, JavaScript, Python, C, NodeJS, Express, MongoDB, CSS, HTML, XML
- Software Tools: VS Code, Eclipse, GitHub, PyCharm, Docker, Cisco Packet Tracer, SolidWorks, MATLAB, Anaconda, MongoDBCompass
- Mechanical: knockout, drill press, grinder, impact driver, blowtorch, and various hand tools
- Electrical: multimeter, crimping tool, soldering, insulation tester, DLRO, and phase rotation meter
- Personal: fast-learner, works well in a team or individual setting, detail-oriented, initiative taker, life-long learner, and prompt
- Certifications: Substation Maintenance, Circuit Breaker/Medium-Voltage, Basic Electrical Troubleshooting, Battery Maintenance and Testing, Infrared Thermography I, Electrical Safety for Industrial Facilities

### Education

B.S. Computer Science | West Chester University | Estimated Graduation Date: Dec 2023 | GPA: 3.87

- Awards: Dean's List (2022), placed 3rd in the WCU CS Programming Competition in Java (Spring 2022, Spring 2023), and participated in the ICPC 2023
  - Memberships: WCU Computer Science Club, Competitive Programming Club

# N/A | United States Naval Academy | Sep 2007 – Sep 2010

 Mechanical Engineering and Economics majors. Commandant's List Spring of 2009. Sea Trials Leader for 2008 and 2009.

## **Experience**

# Software Intern | QSI Technologies Inc. | May 2022 - Dec 2022

- Implement front-end code in CSS, XML, and HTML to expand company capability from desktop-only website to the mobile platform
- Optimize web pages using responsive design for mobile use while prioritizing customers' requests of desired site features
- Developed enhancements that will be implemented in the next software update to service all internal and external QSI customers
- Meet with software team to present and obtain feedback on the mobile design

# Hydro Maintenance Electrician | California Department of Water Resources | Nov 2014 - Nov 2021

- Supervised an Electrician Apprentice in day-to-day operations
- Led in planning and executing facility lighting project from start to finish
- Performed maintenance and repair of all electrical equipment and apparatus of a large hydroelectric installation, from 24 V to 230,000 V

## Assistant Operator | Pactiv | Aug 2013 - Nov 2014

Ensured proper operation of all machines in the production facility

# Machinist's Mate and Midshipman | United States Navy | Aug 2006 - Nov 2010

- Trained to be a Mechanical Operator for submarines
- Held Secret level clearance

# Stephen d. Caliendo

912 Owen Road, West Chester, PA 19380 | (484)-844-9353 | SC928713@wcupa.edu

# **Objective**

Apply computer science skills to software engineering opportunities in the information technology industry. Expand skillset through freelance programming opportunities.

# **Education**

B.S Computer Science | West Chester University, PA | May 2023

- Proficient in Java, C, C++, Haskell
- Skilled in writing code from scratch, and utilizing public source code, to solve complex computer science problems.
- Adept at troubleshooting and debugging code.
- · CSC 468 Cloud Computing
- ·\_\_\_\_CSC 402 Software Engineering
- ·\_\_\_\_CSC 241 Data Structures and Algorithms

## **Experience**

The Sea Pines Resort | Hilton Head SC | 2020 - Present

The Social Lounge | West Chester PA | 2018-2020

Food Runner | Line Cook | Expo | Waiter

- Maintained high level of customer service.
- Excelled in team environment.
- Responded to and resolved problems as they arose.

Empwrd Mind | San Diego CA | 2022-2022

- \_\_\_\_Implemented opensource libraries in complex code products.
- Worked with other interns to complete deliverables on time.

## **Skills**

§ Data analysis

§ JGrasp, Virtual Studio Code

§ Refactoring code, Object oriented design, Algorithm optimization

# Brandon Kohler

267-975-1813 | BrandonKohler2000@gmail.com | linkedin.com/in/brandon-kohler-1788391b7/ | github.com/Kohler123

### **EDUCATION**

### West Chester University

West Chester, PA

Bachelor of Science in Computer Science

Sept 2019 - Aug 2023

- CSC496 iOS Development: Language basics, SwiftUI, SpriteKit, MVC Pattern
- CSC468 Cloud Development: Cloud Computing, Virtualization, Containerization, and Orchestration
- CSC402 Software Engineering: Object Orientated Design Principles, Refactoring, and Design Patterns
- CSC321 Database Management: Table Design and Normalization, UML Design, Web-based Database System
- CSC231 Computer Systems: Memory hierarchy, Optimizing program performance, Operating Systems and Network functions
- STA 200 Statistics II: Normal Distribution, Hypothesis Testing, and Linear Regression Analysis of Variance, Multiple Regression, Categorical Data and Chi-square Analysis and Nonparametric

### EXPERIENCE

### Information Technology Sector Head

Sep. 2020 – Present

West Chester Investment Group

West Chester, PA

- Manages a group of analysts, with weekly meetings and teaching of appropriate topics over a span of a semester.
- Utilizing Financial Accounting concepts, Monte Carlo, VAR, Risk Analysis, Stochastic processes, Approximations, and Sentiment Analysis
- Using Bloomberg Terminal to create risk models, financial forecasting, and fundamental and technical valuation, to optimize portfolio allocation and performance

### West Chester University Competitive Programming Contest

March 2022-Current

West Chester University Competitive Programming Club

West Chester, PA

- Students were presented with a number of problems with a limited amount of time.
- Encouraged students to strengthen coding skills

### Office Assistant

June 2021 – August 2021

Moreland Development LLC

Philadelphia, PA

- Determined the length of time to maintain various documents such as tax returns, human resource records, leases, sale documents, and construction documents.
- Implemented this plan based on relevant documents by sorting through documents and reorganizing the files by project and year.

### **PROJECTS**

### iOS Game | Swift, SwiftUI

Dec 2022

- Created a Game using Swift that utilizes Swift's contact detection, SpriteKit's, and Swift's Game Physics
- Used API for Game images that were used in UI

### Financial Scraping | Python

March 2022

- Created a project for West Chester Investment Group that utilized APIs and Pandas data frame functions to get the most recent prices as well as ratios to perform fundamental analysis
- Used Pandas and Numpy for tasks

### Website Portfolio Project | JS, CSS, HTML

June 2022

- Created a website over the summer using CSS/HTML/JavaScript to demonstrate development skills.
- Learned basic JS and utilized Grid and Column Structure using HTML/CSS

### TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript, HTML/CSS, SQL, VBA,

Frameworks: React, Node.js

Developer Tools: Bloomberg Terminal, Excel, SPSS, MatLab Git, Docker, Kubernetes, Jenkins, Visual Studio,

PyCharm, Eclipse

Libraries: Pandas, NumPy, Matplotlib

Certificates: [Linkedin: Business Statistics using Excel, Statistics and Probability], [Code Academy: Python 3, SQL,

Data Structures, Sorting Algorithms, Linear Structures

# JACOB PETERSON

**Address:** 94 Hornbean Ave, Swedesboro, New Jersey 08085 **Phone:** 484.326.4896 **Email:** jakepeterson2001@gmail.com

### - PROGRAMMER -

#### **EDUCATION**

West Chester University of Pennsylvania, West Chester PA B.S. Computer Science Anticipated May 2023 GPA 3.6

### WORK EXPERIENCE

### Amazon, Logan Township, New Jersey

#### WAREHOUSE ASSOCIATE

2020-Present

- Ensuring all customer parcels are carefully packaged and shipped efficiently
- Organizing specific packages by businesses and destination
  - Collaborative with team members and management
- Perfect attendance and punctuality for 2 years

### Kohl's, Media, Pennsylvania

### FLOOR ASSOCIATE / CUSTOMER SERVICE

2018-2020

- Helping customers find items
- Recommending certain products based on professional experience
  - Using knowledge of the POS system to help customers purchase, return or exchange items in a quick mannerly fashion
  - Educate customers on the return policies of the company and help them choose the outcome that most benefits their experience
  - Cross trained in Customer service, Back stocking, Inventory, Homegoods, and Shoes.

### ACHIEVEMENTS AND CERTIFICATIONS

- Computer Security Certificate
- Advisor to Computer Science department hiring process
- Deans list 2 semesters

### SKILLS AND CODING LANGUAGES

- Proficient in Java
- Proficient in C
- Proficient in Python
- Proficient in Linux terminal environment
- Familiar with Microsoft Office Suite
- Familiar with HTML