PriceFetchR

Abigail Clemens
James Park
Steven Wetten
HaoLun Zhang

Chapter 1: Vision

Introducing PriceFetchR, an innovative program that will revolutionize the online shopping experience by providing users with comprehensive product comparison and intelligent price-tracking across multiple e-commerce websites, as well as an efficient budget management system. PriceFetchR will serve as a one-stop solution for users looking to find the best deals and stay within their budget.

PriceFetchR will allow users to search for a product on multiple sites at once, using several comprehensive filters such as price minimum and maximum, location, and availability, among others. PriceFetchR will then display the top results from each site, based on the filters and search inputted by the user, along with a link to the product page, the current review rating, the estimated shipping time, and the current price of the product. In addition to this, PriceFetchR will include a price-tracking and budget management system.

The PriceFetchR price-tracking and budget management system will work as follows: the user will perform the search for a product as outlined above. Following this, if the user sees a product they wish to price-track, they will click a "track this product" option listed next to it. A menu will pop up and ask the user what price they would like to purchase the product for, and the user will input a price. The product will then be listed under the "price tracking" page of the main website, and a notification will appear on the website when the product drops to or below that price point.

Summary of Key Features:
- Product comparison among multiple websites simplified into one easy-to-use interface
- Receive top product prices, ratings, and shipping times in little to no time at all
- Track product prices effortlessly using a quick and simple price-tracking and budget management system
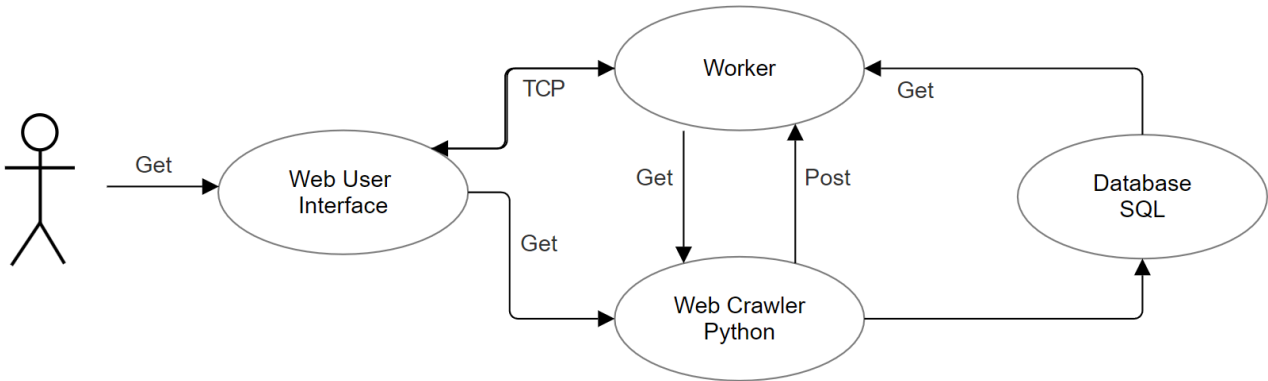
Chapter 2: Proposal

Figure 1

Figure 1 is a diagram of the PriceFetchR architecture, which works as follows. The user will interact directly with the Web User Interface, which will receive the user's search parameters and filters and pass them to the Web Crawler and Worker. The Worker will then coordinate and control the operations of the Web Crawler to retrieve search results, which will be stored in the SQL Database. The requested data will be retrieved by the Worker from the SQL Database and properly formatted and prepared before it is sent back to the Web User Interface for presentation to the user. When the user selects a product to price track, this process will be performed automatically, but only for that specific product. The Web User Interface will be composed of HTML and CSS, the Worker and Web Crawler will be programmed in Python, and the Database will be SQL.

Haolun Zhang

215-882-2692 | eric.h.zhang460@gmail.com

EDUCATION

Delaware County Community College   Media, PA

Associate Degree in Computer Science GPA: 3.39   *Jan. 2020 – August. 2021*

West Chester University   West Chester, PA

Bachelor's Degree of Computer Science GPA: 3.44   *Sep. 2022 – May 2024*

EXPERIENCE

Equuleus International Clu   June 2021 – August 2021

Office Assistant

- Demonstrated expertise in utilizing Excel to effectively sort, filter, and manipulate large amounts of data.
- Extensive experience in using Excel for data cleansing, data validation, and data visualization tasks.
- Skilled in using Excel for data management, organization, and analysis of extensive datasets.
- Proven track record of efficiently managing and organizing large documents using Word's navigation and referencing tools.
- Strong ability to create and format tables, charts, and graphics in Word to enhance document presentation.

Alpha Computer   May. 2015 – October 2015

Front Desk Assistant   *Malvern, PA*

- Meet and assist incoming customers promptly
- Set up, test, and configure networks, desktops, laptops, and printers,
- Assist in basic administrative tasks, including document filing and record keeping, concerns, and issues professionally and efficiently.

PROJECTS

Database Management Project | *Python, SQL*   Sep 2023 – Dec 2023

- Utilizing Microsoft Access to design and develop a database, including creating tables, and establishing relationships.
- Writing queries, and generating reports to support internal data management and information tracking within the organization.

Market Trends Analysis | *Python*   Oct 2023 – Dec 2023

- Perform a thorough examination of the used car market through Python
- Utilizing the programming language for data manipulation, cleaning, and exploratory data analysis tasks.
- Using data visualization libraries to generate informative charts and graphs, effectively illustrating market trends within a designated data range.

TECHNICAL SKILLS

Languages: Java, Python, SQL, Ocaml
Developer Tools: PyCharm, IntelliJ, Jupyter Notebook

Libraries: Pandas, NumPy, Matplotlib

Abigail Clemens

Garnet Valley, PA (215) 275-1927 arclemens@gmail.com

Goal

A job that will allow me to grow and expand my knowledge of modern software development practices.

Software Skills

ᴠ Proficiency in **Java**
- o Developed a **lexical and syntax analyzer** that analyzed a simple language.
- o Developed a simple computer game that had a goal of jumping over as many moving blocks as possible and recorded a high score.
- o Used run time and compile time polymorphism to enhance functionality of various computer programs.

ᴠ Proficiency in **Swift**
- o Developed a simple computer game that had a goal of collecting coins and avoiding bombs that was based on a game called *Richman 4*.
- o Used unique properties of **Xcode** to develop simple games that incorporated physics and scoring systems.

ᴠ Working knowledge in **Python**, **OCaml.** and **Git**

ᴠ Proficiency in **Windows** and **Mac OS** with working knowledge in **Linux**

ᴠ Proficiency in **Word**, **Excel**, and **PowerPoint**

Education

West Chester University — West Chester, PA
Bachelor of Science in Computer Science
Mathematics Minor
May 2024
GPA: 3.79/4.0
Computer Science Courses

- v Topics in Complex Systems (iOS App Development)

- v Database Management Systems

- v Digital Image Processing

- v Data Structures and Algorithms

Activities:

- v West Chester University Esports Club

  - o President from August 2022 to present

  - o Organized an esports tournament series in King of Prussia from March 2023 to June 2023

Other Experience

Wegmans — Concordville, PA

Cashier, October 2019 to March 2020, June 2021 to Present

- v Provided excellent customer service by being friendly to customers and helping them locate desired items.

- v Achieved a high IPM (items per minute) of 18 in order to assist customers quickly.

- v Received training in other areas to learn more and help benefit the company.

- v Learned to work in the deli.

Steven B. Wetten

Lewisberry, PA 17339
(717) 798-1709 | stevenwtgf@gmail.com

Education

B.S. in Computer Science & Computer Security Certificate
West Chester University of Pennsylvania, West Chester, PA Cumulative GPA – 3.68
Relevant Coursework:

- CSC 141 – Computer Science I
- CSC 142 – Computer Science II
- CSC 231 – Computer Systems
- CSC 240 – Computer Science III
- CSC 241 – Data Structures & Algorithms
- CSC 345 – Programming Language Concepts / Paradigms
- CSC 402 – Software Engineering
- CSC 416 – Design / Construction of Compilers
- CSC 472 – Software Security

Experience

Programming Competition Student Judge West Chester University, West Chester, PA March 2023 – November 2023

- Collaborated with a team of peers to write several programming problems for three separate programming competitions
- Displayed leadership throughout the development of problems of differing difficulty through coordination and delegation of work

Programming Competition Club Secretary August 2023 – Present West Chester University, West Chester, PA August 2023 – Present

- Led meetings studying recent coding competitions and various programming concepts
- Assisted peers and newer students with their programming issues and questions

Skills

- Java
- Object-Oriented Programming
- Data Structures & Algorithms
- Software Engineering
- Functional Programming
- Compilers
- Haskell
- Python
- C

- Linux
- Eclipse
- Github

James Park

jp1014506@wcupa.edu | 610-864-5133 | linkedin.com/in/james-park-0b02a6b6/

I am a product-driven individual with a wide array of professional experiences looking for a full-time position or internship that will lead to gainful employment for my last year at school. AI, Machine Learning, and Natural Language Processing are some of the areas that I would like to learn more about and work in, and I have experience in general troubleshooting for Windows and Macs, Object-Oriented Programming languages, Assembly language, Networking, and more. I am open to working in almost any industry but find work in international or political issues, food, and finance the most interesting.

Education
West Chester University of Pennsylvania West Chester, PA; *Jan 2023-Current*
-Pursuing Computer Science B.Sc. and Linguistics Minor | Expected graduation in June 2025 | Current GPA: 3.72
-Participant in: WCU Sept 2023 Programming Competition | CSTA Hackathon Sept 2023- 1st Place | WCU March 2023
Programming Competition- 3rd Place | March 2023 Python Bootcamp | April 2023 West Chester Programming Competition

George Washington University Washington, DC; *August 2008-July 2012*
-International Affairs B.A. | Chinese Language and Literature B.A.

Additional Skills
-Java, C, Python, HTML/CSS, SQL
-Multilingual in Mandarin, Korean, and Nepali
-Excellent Public Speaker

Relevant Coursework
   I have taken courses on Discrete Math, Calculus, Statistic, Java, SSH and other network protocols, along with general education requirements necessary for my degree completion at WCU. These include Chemistry, Geology, & Business Writing.

Work Experience
Infinitus; Remote; *Dec 2023 - Present*
AI Operations Intern
-Developed an understanding of the healthcare insurance landscape, especially issues surrounding payments
-Operated the AI interface at the customer-interaction stage to ensure smooth and useful conversation
-Performed data-entry of patient and insurance information into specific formats for AI improvement

West Chester University Tech-Fee Computer Lab Intern West Chester, PA *May 2023 - Present*
-Monitoring the software, hardware and accessories for the over 3,000 Tech-Fee devices on WCU campus
-Providing support for the faculty/staff and students, including troubleshooting, upgrading devices, and recycling
-Negotiating solutions for issues pertaining to devices, software, and general use of the labs

West Chester University Chinese Language Tutor West Chester, PA *Jan 2023 - Present*
-Providing weekly in-person and online tutoring sessions to students enrolled in the Chinese program
-Coordinating lesson plans and student progress reports with the faculty to ensure student success

Community Academy of Philadelphia Information Technology Intern Philadelphia, PA *June 2022-Jan 2023*
-Assisted in organizing, cleaning, and maintaining inventory of computers for staff and students
-Resolved technology-related issues for faculty and students during school hours
-Organizing spreadsheets to record which devices are with whom

Dig Acres Assistant Manager Chester, NY *June 2018-Oct 2021*
-Lead manager in Food Safety and farm adherence to Good Agricultural Practices (GAP) regulations
-Managed and taught crew of 3-5 apprentices for 8-9 month through an intensive agricultural education program
-Oversaw and organized harvesting, weeding, plowing, and other activities related to day-to-day farm operations
-Facilitated Dig Supply Team and Corporate offices on various projects and operations
-Frequently held or attended events that promoted the farm and company

Peace Corps Nepal Food Security Volunteer Khasyauli, Palpa District *March 2015-June 2017*
-Trained local farmers on growing higher-quality vegetables and increasing seasonal availability, including high-yield intensive

methods on small plots of land
-Co-Facilitated week-long agricultural camp for village youths, topics ranged from land-restoration to gender &caste issues
-Established a System of Rice Intensification demonstration with three model farmers, with a 100% increase in production
-Discussed nutrition-related diseases with locals and held cooking & gardening demonstrations with the goal of long-term behavior change