Weronika Matuszczak

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EDUCATION

University of Pennsylvania *Master of Computer and Information Technology* GPA: 3.97/4.00 | **Aug 2023**
University of Oregon *B.A. in Business Administration Finance, Mnr in Economics* GPA: 3.85/4.00 | **Mar2020**
University of San Francisco *102 credits towards Finance and Economics* GPA: 3.99/4.00 | **Aug 2018**

TECHNICAL SKILLS

Languages: Java | Python | C++ | React | JavaScript | HTML | CSS | C | MySQL | SQLite
Systems and Tools: Docker | Git | Linux | Pandas | Flask | Tkinter | NumPy | Matplotlib

PROJECTS

Web Search Engine - Java, Java Script, HTML - Built a cloud-based Google-style search engine from scratch using core Java libraries. Components included a dynamic web server, crawler, Spark-like data processing engine, indexer, PageRank, and ranker. Deployed the project on AWS.

Distributed Hash Table-Based Search Engine - C++ - Implemented a peer-to-peer search engine that runs over a self-built Chord Distributed Hash Table. The project uses the ns3 discrete network simulator extended to support custom link-state and distance-vector protocols. Utilized Docker as an underlying system.

AI-Driven Pacman Game - Python - Implemented an Approximate Q-Learning agent trained using reinforced learning algorithms which picks optimal actions and eventually wins the game.

Language Models - Python - Implemented Markov (n-grams) and perceptrons (neural network) based models for text prediction, recognition, and classification.

Software Analysis Tools - C++, Python - Using LLVM compiler infrastructure developed dynamic and static analysis tools to uncover insidious bugs, prevent security vulnerabilities, and automate testing and debugging.

Flu Spread Indicator Based on Tweeter Data - Java - Developed an application that filters database-retrieved tweets containing flu information and uses their geolocation to count and map flu occurrences across the US.

TCP Client-Server Three-Way Handshake - C - Implemented multi- and single-threaded servers to handle concurrent client requests by monitoring multiple sockets using an event-driven approach and asynchronous I/O.

Face and Motion Detector - Python - Constructed a webcam motion detector that highlights and records timestamps of the moving objects, then plots them using Bokeh and Pandas as an interactive and CSV downloadable graph.

Interactive Map - Python, JavaScript, HTML - Designed a multilevel interactive map of my parents' trip to the US. The map shows visited cities and parks with a zoom-in option for further exploration of the attractions within the area. Each point is represented as a pop-up with a photo, and a link to a Wikipedia page containing details of the place.

WORK EXPERIENCE

SuChef | Remote | Software Engineer Intern **Jan 2023- Present**
Collaborated on migrating SuChef's web app to React and node.js, autonomously designed login, and sign-up, as well as enhanced recipe builder pages. Managed MongoDB data operations for image uploads and deletions, facililated seamless AWS transfers, and crafted a specialized page enabling restaurant owners to effortlessly share job postings.

University of Pennsylvania | Remote | Teaching Assistant (TA) **May 2022- Aug 2023**
Supported instructors of Artificial Intelligence, and Data Structures & Software Design courses. Prepared and graded exams, held weekly office hours, led recitations, and answered questions on a discussion board for up to 300 students.

University of Pennsylvania | Remote | Head Teaching Assistant **Jan 2023- May 2023**
Oversaw and mentored 20 TAs, provided updates to course content and assignments, conducted interviews for prospective TAs, and handled various administrative tasks.

Summit Bank | Eugene, OR | Associate Business Client Advisor **Jun 2020- Apr 2021**
Performed financial analysis and economic outlook of small and medium-sized businesses in Lane County, Portland, and Central Oregon. Underwrote and presented to Business Client Advisors loans with a total exposure up to $5.6MM.

Prologis | San Francisco, CA | Intern in Financial Planning and Analysis **Jun 2018- Aug 2018**
Created a model for more accurate interest expense projection. Collected, consolidated, and interpreted data from various departments to perform ROI analysis. Used Bloomberg to update TSR and calculate treasure awards.

HONORS AND ACHIEVEMENTS

Fluent in Polish and English, advanced proficiency in Russian (B2 Level Russian Language Certificate)
3rd place at the European Cross Country Championships (2019)
2nd place as a team and 5th individually at the Division I NCAA Cross Country Championships (2018)