

# Weronika Matuszczak

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## EDUCATION

<b>University of Pennsylvania</b> <i>Master of Computer and Information Technology</i>	GPA: 3.97/4.00   <b>Aug 2023</b>
<b>University of Oregon</b> <i>B.A. in Business Administration Finance, Mnr in Economics</i>	GPA: 3.85/4.00   <b>Mar 2020</b>
<b>University of San Francisco</b> <i>102 credits towards Finance and Economics</i>	GPA: 3.99/4.00   <b>Aug 2018</b>

## 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, facilitated 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)  
I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process.