Nathaniel Wang

631-697-4402 | new2127@columbia.edu | linkedin.com/in/nathanielwang | github.com/nathanielwang01

EDUCATION

Columbia University Sep. 2023 – Feb. 2024
Master of Science in Computer Science, Machine Learning *New York, NY*

Columbia University Sep. 2019 – May 2023
Bachelor of Arts in Computer Science, Intelligent Systems *New York, NY*

EXPERIENCE

Software Developer Sep. 2023 – Present
Columbia University School of International and Public Affairs *New York, NY*
- Designed and implemented early voting information components according to user feedback using JS and PHP
- Maintain database of election and candidate information using SQL

Research Assistant Sep. 2023 – Present
Columbia University School of International and Public Affairs *New York, NY*
- Analyze textual data using Python, Pandas, and Seaborn to support a new Harlem technology initiative
- Facilitate workshop series to educate and gauge participant attitudes towards technology
- Present findings and visualizations to non-technical audiences

Teaching Assistant Jul. 2022 – Aug. 2022
Fu Foundation School of Engineering and Applied Science *New York, NY*
- Mentored and provided support to over 80 students in learning natural language processing
- Graded exams and assignments via static and dynamic analysis to accurately provide feedback to students

Undergraduate Research Intern May 2022 – Aug. 2022
Fu Foundation School of Engineering and Applied Science *New York, NY*
- Utilized Python, Pandas, and Twitter/Reddit APIs to scrape tweets, comments, and user geolocation data
- Formulated sentiment analysis model to develop insights on NYC residents' opinion on subway safety
- Visualized data to draw conclusions regarding impact of Russo-Ukrainian conflict on human mobility

PROJECTS

Food Pantry Portal | *Flask, SQLite, JavaScript, Balsamiq, Figma* Sep. 2023 – Dec. 2023
- Developed a volunteer scheduling application for the Columbia Food Pantry
- Designed, prototyped, and implemented a web-based user interface using Flask and JS
- Integrated with SQLite database for user data and authentication

Symbolic: Medical Data Service | *Spring, Maven, Mockito, Java, Postman* Sep. 2023 – Dec. 2023
- Developed a service to handle medical data using the Spring framework that serves various API endpoints
- Implemented a RESTful API to handle requests from multiple simultaneous client connections
- Conducted unit and integration tests using Mockito and Postman

Exploring Headlines Using Embedded Representations | *BS4, Doc2Vec, NLTK* Sep. 2022 – Jan. 2023
- Applied unsupervised learning techniques to find connections between abstract criteria in news headlines
- Used K-means clustering, dimensionality reduction, and word embeddings to derive insights from textual data
- Discovered a novel connection between preferred news headline framing techniques and culture-of-origin

Nutritional Information Database | *Flask, MongoDB, JavaScript, HTML, CSS* Feb. 2022 – Mar. 2022
- Led efforts to prototype a database and food product search engine to improve users' access to nutritional data
- Designed a MongoDB database using raw data sourced from the U.S. Department of Agriculture
- Created Python API bindings for an application-specific database to support back-end development

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, SQL, C/C++, HTML/CSS, PHP, R
Frameworks: Flask, Spring, Remix, Mockito
Development Tools: Git, Conda, GitHub Actions, Google Cloud Platform, Postman, PyCharm, IntelliJ, Linux
Relevant Coursework: Advanced Software Engineering, UI Design, Data Structures, Advanced Programming, Advanced Database Systems, C++ for C Programmers, Analysis of Algorithms, Computational Aspects of Robotics