Teresa Nguyen

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Education

Yale University Aug. 2023 – May 2027

B.S. Statistics and Data Science, Certificate in Computer Science | GPA 3.87/4.00 *New Haven, CT*

- **Relevant Coursework**: Computing for Engineers & Scientists, Data Exploration & Analysis, Multivariable Calculus, Linear Algebra, Intermediate Microeconomics, Probability, Information Systems, Biomedical Research
- **Activities**: Code Haven (CS Mentor), Society of Women Engineers, Computer Society (UX/UI Team), Science & Technology Research Scholars, Matriculate (College Mentor), Women & Gender Minorities in CS

Technical Skills

Programming Languages: Python, SQL, C/C++, MATLAB, Java, HTML/CSS, React.js, R
Frameworks and Libraries: TensorFlow, Keras, Scikit-learn, NumPy, pandas, Matplotlib, LangChain, Gradio
Tools and Platforms: Linux, PowerBI, Looker Studio, Google Analytics, HubSpot, Jira, Stash, Git, VSCode

Experience

Machine Learning Research Assistant Jan. 2024 – Present

Yale University School of Medicine | Smart Medicine Lab *New Haven, CT*

- Developed **machine learning** models such as artificial neural networks, logistic regression, Naive Bayes, and random forest using **TensorFlow** and **Scikit-learn** to predict lung cancer risk from personal health data
- Utilized Python to compute and analyze **statistics** to quantify model with a prediction accuracy of 95%
- Performed **data cleaning** on dense clinical datasets using **R** and **Python**, applying KNN imputation, mean imputation, and normalization techniques to enhance data quality and model performance

Software Engineer Intern Jun. 2024 – Aug. 2024

Medtronic | Surgical Robotics Released Product Engineering Team *North Haven, CT*

- Engineered a surgical robot **chatbot**, improving knowledge sharing via building retrieval augmented generation chains using **Langchain**, **Chromadb**, **Large Language Models** for back-end and **Gradio** for front-end
- Enhanced log analysis interface by developing algorithms for 10+ feature/debugging tickets and conducted code reviews using **Python**, **Jira**, and **Stash** in a **Scrum** team using **Agile**, delivering robust, time-efficient solutions
- Architected and deployed **PowerBI** databases, optimizing the linkage between parent tickets, notification codes, and keywords which significantly improved debugging efficiency, triage processes, and ticket classification accuracy

Data Analyst and Marketing Intern Aug. 2022 – Aug. 2023

XCentium *Irvine, CA*

- Communicated with the marketing team and clients to deliver recommendations regarding company-consumer interaction, such as ways to improve clicks by analyzing direct and organic searches
- Produced over 15 analytic reports, recommending activities for bounce rates, click-through rates, and impressions based on statistics from **Google Analytics**, **HubSpot**, and **Search Console**, improving market presence

Nanomaterials/Material Science Research Assistant Jun. 2022 – Mar. 2023

California State University, Long Beach *Long Beach, CA*

- Analyze the synthesis of carbon quantum dots in fluorescent materials using Fourier Transform Infrared Spectroscopy, improving manufacturing industry polymers by making tears and damages more easily detectable
- Built a computer program that automatically calculated the weights of reactants and products before and after chemical reactions (stoichiometry) using **Java**, resulting in an increase in the speed of research development
- Achieved 1st in Chemistry, Top Project, and State Finalist at the Orange County Science Engineering Fair

Projects

Predicting Employment Transitions with Markov Chain Models | *MATLAB, Data Analysis, Linear Algebra*

- Collaborated with economists to deploy a Markov chain calculator that outputs diagrams and probability matrices in **MATLAB** to gain insights into the labor market using time series unemployment data
- Created visualizations (heatmaps, transition diagrams, time evolution plots) to communicate data trends

Pneumonia Detection Using Deep Learning | *Python, TensorFlow, Scikit-learn*

- Implemented a convolutional neural network (CNN) using VGG16, fine-tuning on X-ray data to detect pneumonia
- Executed preprocessing data using OpenCV, including image resizing, normalization, and augmentation with ImageDataGenerator for improved model generalization