Mays Neiroukh

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EDUCATION

Carleton College Northfield, MN

B.A., Major Computer Science, Minor in Mathematics (GPA of 3.4) *Sept 2021 – Jun 2025*

Related Courses: Introduction to Statistics, Introduction to Statistical Inference, Probability, Mechanics and Thermodynamics, Genes, Evolution, and Development and lab, General Chemistry (I), Machine Learning, Electromagnetism and Optics.

SKILLS

- Programming languages: Python, Java, C, R
- Data Analysis Visualization, Quantitative Analysis, Data Structures and Algorithms
- Packages: Pandas, Numpy, Sckitlearn, matplotlib, Keras
- Computer :Word, Excel, PowerPoint, Google Suites, Zoom
- Language: Fluent in Arabic
- Proficiency in public speaking

RESEARCH EXPERIENCE

Mayo Innovation Scholars *Oct 2023 – Mar 2024*

Mayo Clinic, MN

- Identify relevant intellectual property and collaborate on Mayo Clinic innovation disclosures.
- Conduct competitor analysis and SWOT analysis for intellectual property related to radiology technology under an NDA.
- Advise Mayo Clinic personnel on how to license their intellectual property through stakeholder analysis, profit projectors, and suggestions of potential licensees.
- Present recommendations to an audience of 50+ Mayo Clinic employees and college faculty, staff, and students.

NSF-REU Research Intern: *Leveraging Machine Learning in the Design of Novel Ionic Liquids* *Jun 2023 – Aug 2023*

Department of Fluid Power Institute, Milwaukee School of Engineering

- Implemented and optimized codebase for data analysis, enhancing the efficiency and accuracy of ionic liquid property predictions using python.
- Performed comprehensive data preprocessing and cleaning for more than 100k data points.
- Leveraged various Python packages such as NumPy, Pandas, Matplotlib, and Scikit-learn to optimize data processing and perform data visualization for ionic liquids.
- Presented findings through a presentation, poster, and research paper to be published.

PROJECTS

Diabetes Prediction Neural Network Specialist *Feb 2024 – Mar 2024*

- Developed an advanced multi-neural network to predict diabetes with over 90% accuracy, preprocessing dataset of 30k data points, including feature scaling, addressing data imbalance, and data cleaning, to enhance model performance.
- Mastered model optimization through hyperparameter tuning, implementing adaptive learning rates and dropout regularization, showcasing acumen in TensorFlow and Keras to improve precision and recall by over 10%.
- Translated complex model outputs into strategic insights with visualizations of key performance metrics, demonstrating proficiency in Python, data analysis, and visualization libraries for impactful cross-functional communication.

Self-Driving Go-Kart *Oct 2022 – Jan 2023*

- Collaborated with a multidisciplinary team or students to develop a self-driving go-kart.
- Conducted physical and electrical improvements to the go-kart to optimize its performance and safety.

Traveling Salesperson Problem *Jan 2023*

- Developed an efficient TSP solver algorithm for a dataset of hundreds of datapoints.
- Demonstrated expertise in algorithm design and optimization.

WORK EXPERIENCE

Resident Assistant *Sept 2022 – Present*

Carleton College

- Employed analytical problem-solving skills to promptly address resident concerns and create an inclusive living environment.
- Demonstrated project planning and budgeting capabilities by orchestrating diverse community events including events with different campus partners.

INVOLVEMENT

Girls Who Code *Aug 2023 – Current*
Society of Women Engineers *Sept 2023 – Current*
Milwaukee Bucks STEAM Camp Volunteer *July 2023*

LABORATORY SKILLS

• Experience with setting up PCR reactions and using PuReTaq Ready-To-Go PCR Beads (GE Healthcare).
• Experience with gel electrophoresis for amplification confirmation.
• Familiarity with software tools such as 4Peaks and Clustal Omega for sequence analysis and alignment.
• Proficiency in using Excel for data analysis, including calculating averages, standard error, and running statistical tests such as t-tests and chi-squared tests.
• Hazardous Material Handling.