Fuad Thabet

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EDUCATION

University of Ottawa
Apr 2026

Bachelor of Science in Computer Science, Specialization in Data Science
- Relevant Coursework: Machine Learning, Databases, Discrete Structures, Data Structures & Algorithms, Fundamentals of Data Science, Object-Oriented Programming (OOP), Unit Testing, Operating Systems

EXPERIENCE

Full-Stack Web Developer
Oct 2023 - Apr 2024

Mooruk Design Solutions   *Ottawa, ON*
- Built a custom **CRM system** to manage client interactions, employee workflows, and customer support.
- Integrated **JavaScript and React** into a client-server web application that successfully handles **HTTP** requests with asynchronous API calls
- Implemented version control using **Git** to track changes efficiently and ensure code integrity.

LEADERSHIP

Lead Software Engineer
Dec 2024 - Present

Kaizen   *Ottawa, ON*
- Created and launched a responsive UI with **PrimeReact** components and custom **React** hooks for time tracking, resulting in a **40%** increase in mobile user engagement and a **30%** reduction in time entry errors.
- Engineered a robust **Firebase Authentication** system with secure token validation, enabling seamless on-boarding that reduced user registration abandonment by **35%** compared to previous authentication methods.
- Leveraged **TypeScript** and **PostgreSQL** to create a type-safe, reliable backend with complex data relationships, ensuring data integrity while delivering below **200ms** API response times even under heavy load conditions.

PROJECTS

Linear Regression Models ⍾ | *Python, NumPy, JavaScript, HTML, CSS*   Feb 2025 - April 2025
- Designed and implemented a comprehensive linear regression library without using scikit-learn, achieving **95%** accuracy compared to industry-standard implementations.
- Enhanced usability for **Javascript** front end web application with smooth animations and reduced load time by **40%** through optimized data loading and model operations for training, testing, and predicting.
- Optimized gradient descent algorithms by implementing vectorized operations in **NumPy**, improving computational efficiency by **300%** compared to initial loop-based implementation.
- Built interactive visualization tools using **Matplotlib** to analyze model performance and parameter convergence, enabling clearer interpretation of regression results and model behavior.

Housing Price Regression Model ⍾ | *Python, NumPy, Pandas, Seaborn*   Feb 2025 - Mar 2025
- Implemented and compared multiple regression models (Linear, Lasso, ElasticNet) achieving best RMSE of 19,127 with Linear Regression.
- Demonstrated that simple Linear and Lasso Regression outperformed more complex models, providing a **20%** improvement over ElasticNet.
- Created a robust data preprocessing pipeline including categorical encoding, outlier detection with Local Outlier Factor, and K-Fold cross-validation to ensure stable model evaluation across multiple data partitions.

Housing Price Regression Model ⍾ | *Python, Jupyter, Pandas, Seaborn, NumPy*   Jan 2025 - Mar 2025
- Revised data processing efficiency by reducing runtime by up to **50%** through implementing vectorized operations and NumPy broadcasting, replacing iterative loops with the MapReduce paradigm.
- Detected and removed statistical outliers using Z-score and IQR methods across numerical features such as square footage and lot area; enhanced model robustness and reduced MSE by **18%** post-cleaning.
- Diagnosed patterns of missingness using heatmaps and value counts by preserving local variance and improving regression accuracy by 12% through implemented conditional imputation based on neighborhood and house style.

SKILLS

Certifications: Supervised Machine Learning: Regression and Classification
Languages: Python, JavaScript, Typescript, Java, C++, Go, HTML/CSS
Frameworks: Next.js, Angular, React, Node.js, Django, Express.js, Swift
Technologies: PostgreSQL, SQLite, Git, PyTorch, TensorFlow, Pandas, Scikit-learn, Seaborn, Keras, Conda, Jupyter