

JOSE VILLEGAS

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SUMMARY

Aspiring data scientist with a computational background and hands-on experience in developing AI/ML models and optimizing algorithms. analytical and problem-solving abilities. Proficient in Python, R, and SQL, eager to contribute innovative, data-driven solutions with predictive modeling and solving problems with data structures and algorithms

EDUCATION

Michigan State University

Bachelor of Science in Computational Data Science

East Lansing, MI

GPA : 3.4/4.00 / May 2026

- Probability and Statistics for Data Science, Fundamentals of Data Science Methods, Numerical Analysis, Data Structures and Algorithms, Matrix Algebra, Optimization Methods in Data Science, Introduction to Machine Learning, Introduction to Parallel Computing, Introduction to AI, Big Data Analysis, Database Systems

PROJECTS

Chest X-Ray Disease Detection | *Python, TensorFlow, Pytorch*

April 2025

- Designed deep learning pipeline with TensorFlow and DenseNet121 for multi-GPU chest X-ray classification
- Streamlined preprocessing and caching for medical imaging, boosting training and validation speed by 30%
- Tuned hyperparameters and evaluated achieving 0.9495 binary accuracy and 0.857 multi-label accuracy

Concrete Crack Detection using ML Techniques | *Python, Tensorflow, OpenCV, Numpy*

April 2025

- Used variety of Machine Learning techniques to analyze a dataset of concrete images
- Added optimization methods to ML techniques to minimize runtime while maintaining good results
- Designed a Convolutional Neural Network using PyTorch, and Optimized CNN with Hyperparameter search to enhance results and classify certain images of concrete as cracked or uncracked

House Price Predictor | *Python, Pandas, Sklearn, Numpy*

March 2024

- Deployed a house price prediction app with estimates powered by over 10 user-defined features
- Implemented feature engineering on over 200K entries, minimizing least important features
- Benchmarked multiple regression models to maximize predictive accuracy, attaining an R^2 value of 0.974

WORK EXPERIENCE

Wayne County Prosecutors Office

Detroit, MI

IT Intern

July 2024 - August 2024

- * Designed and implemented Jira workflow map to create smooth onboarding process for new interns
- * Created multiple custom issue types and service desk configurations to help solve workflow errors in pipeline
- * Produced an improved intern onboarding process to ensure workflow is as efficient as possible

Autonomous Vehicle Club

East Lansing, MI

Software Engineer

September 2024 - December 2025

- * Worked as club associate that simulated driving algorithms to avoid collision with walls on racetracks
- * Leveraged Docker and ROS2, and Foxglove studio to test F1TENTH driving algorithms and simulate them
- * Optimized navigation algorithms for virtual tracks to get consistent results for digitally simulated cars

City of Grosse Pointe Woods

Grosse Pointe Woods, MI

Lifeguard Supervisor

June 2019 - August 2024

- * Maintained a leadership role as a facility manager ensuring equipment safety and making tough decisions quickly
- * Trained lifeguards to respond quickly in dangerous scenarios, while keeping themselves and patrons calm
- * Perfected leadership skills, and ensure proper behavior of employees while being able to collaborate effectively

TECHNICAL SKILLS

Languages: Python, R, MATLAB, SQL, Bash/Shell Scripting, C, C++

Libraries: Pandas, Numpy, Matplotlib, ggplot2, plotly, Tensorflow, PyTorch, Sklearn, Statsmodels.api, Scikit-learn, Data Preprocessing, Flask, FastAPI

Databases/Frameworks: Node.js, Flask, OpenMP, MPI, Keras, Git