

Nicolas Sanchez Noguera

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EDUCATION

University of Michigan

Ann Arbor, MI

Bachelor of Science in Engineering in Data Science, Minor in Mathematics

August 2023

Relevant Coursework: Machine Learning, Data Structures & Algorithms, Calculus, Linear Algebra, Probability Theory

SKILLS

Programming: Bash, C++, C#, CSS, HTML, JavaScript (React), Matlab, Python, R, Solidity, SQL

Technologies: AWS, CI/CD, Docker, Git, Jupyter, MySQL, .NET, OpenSSL, Visual Studio, VMWare, WireShark

Operating Systems: Windows, Linux

Languages: Fluent in Spanish, French, English

Certificates: Hugging Face Deep Reinforcement Learning Course, WandB 101

RELEVANT EXPERIENCE

Data Annotation

Remote

Contractor – Coding Projects

October 2023 - Present

- Simulating user-chatbot dialogues by creating intricate python code generation prompts and formulating accurate responses
- Crafting prompts for dual-chatbot evaluations, focusing on code explanation, bug resolution, and framework selection
- Assessing model performance using metrics such as verbosity, harmfulness, correctness, and instruction following

Rovisys

Aurora, OH

Software Engineering Intern

June - August 2022

- Collaborated with team to design, build, and launch a full-scale data reporting Windows Service for FirstEnergy in C#
- Programmed a data collector that retrieved data from governmental websites using Newtonsoft and HTTPClient
- Configured a PI Data Archive which stored and organized the service's collected data using PISDK
- Provided FirstEnergy with real-time updates on Midwest power plant metrics, boosting operational efficiency

PROJECTS

Personal Project

Miami, FL

Land Use and Land Cover Classification

October 2023

- Designed and implemented a multi-class Image Classifier using a PyTorch 2-D CNN on a Google Colab Notebook
- Trained, validated, and tested the model on remotely sensed images from the EuroSAT dataset, scoring a test accuracy of 84%
- Wrote a comprehensive scientific report on the project, exploring the data, model architecture, and training and eval processes

University of Michigan

Ann Arbor, MI

Autonomous Drawing Arm – Team Project (Python)

December 2022

- Engineered a robot arm that autonomously drew a square on a paper oriented in different angles within a given workspace
- Developed the 3 degrees of freedom arm by incorporating inverse kinematics into the software using numpy and sklearn
- Calibrated the arm using non-linear transformations on the pen and paper coordinates to find appropriate joint angles

Simulated Search Engine – Team Project (Python, Bash)

December 2022

- Developed a scalable search engine which used PageRank and TF-IDF to output appropriate results to a search query
- Designed an inverted index pipeline using MapReduce to organize and compute relevance of documents
- Applied Flask, Jinja, and threading alongside an SQLite database to serve the webpage

Replicated Instagram – Team Project (Python, React/JSX, HTML, SQL)

October 2022

- Created a Dynamic Web Application replica of Instagram with Flask app routing to navigate through pages
- Built a REST API to asynchronously fetch data from an SQLite database in JSON format
- Implemented a React app that handled events, handled server requests, and allowed for infinite scroll on the site's main page

LEADERSHIP & INVOLVEMENT

ALPFA (Association of Latino Professionals For America)

Ann Arbor, MI

VP of Education

January 2022 – December 2022

- Presented weekly educational sessions to inform club members on the recruitment process for Computer Science roles
- Coordinated with E-Board to organize 3 professional Diversity Networking events
- Organized 3 mentor sessions focused on connecting underclassmen with older club members in their career field