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 *Aug 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
Certifications: Hugging Face Deep Reinforcement Learning Course

RELEVANT EXPERIENCE

Data Annotation **Remote**
Part-time LLM training – 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#
- Implemented 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 – Dec 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