YANNI ETCHI

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EDUCATION

University of North Carolina at Chapel Hill | Bachelor of Science in Computer Science and Applied Mathematics
Graduation Date: May 2025
Coursework: Probability, Linear Algebra, Differential Equations, Discrete Mathematics, Data Structures, Computer Systems, Object-Oriented Programming, Mechanics and Relativity.

SKILLS

Languages: Python, Java, HTML/CSS, JavaScript, C, MATLAB
Technologies: Tensorflow, Keras, Numpy, Pandas, Express, Scikit-learn, Git, Node.js, Seaborn, Matplotlib, Flask

EXPERIENCE

Los Alamos National Laboratory | Research Intern – Data Science May '24 – Aug '24

- Incoming data science intern for image comparison library project.

University of North Carolina at Chapel Hill | Math Tutor Aug '23 – Present

- Simplified complex calculus, linear algebra, and differential equations concepts for ~15 undergraduate students per week through personalized one-on-one and group sessions, fostering enhanced understanding and academic progress
- Tailored teaching approaches to cater to individual student needs, facilitating better learning techniques

University of Massachusetts at Dartmouth | Research Intern – Machine Learning Jun '23 – Aug '23
Scikit-Learn, TensorFlow, Keras, Numpy, Python

- Expedited redox active material identification for non-aqueous redox flow battery through extensive **literature review**, **data analytics,** and **machine learning** techniques
- Trained, tested and tuned ensemble regression models on a dataset of 260 cations and their calculated quantum mechanical properties. Utilized **RDKit**, **Multiwfn, and** trained models to analyze and Identify 20 cation prospects from a ChemBL dataset of over 500 molecules based on solubility.

Wake Technical Community College | Research intern – Data Analytics Aug '22– May '23

- Achieved comprehensive **Exploratory Data Analytics** of ~10year worth of census data, revealing nuanced trends in education attainment among diverse demographic groups in the United States.
- Collaborated with team members to enrich insights and ensure thorough d**ata exploration**, while effectively communicating findings to research administration, fostering a deeper understanding of educational patterns and their implications.

PROJECTS

AI Fake News Detection Web App. Flask | TensorFlow | Python

- Developed and deployed a **machine learning** model using **Flask** and **Python** to provide real-time classification of news article reliability
- Employed text tokenization and vector embedding techniques to preprocess sequences of news article data for model training and validation.
- Implemented and validated a Long Short-Term Memory recurrent neural network to process sequences of word embeddings, achieving a classification accuracy of ~ 98% on a test dataset of over 40,000 news articles

Image Caption Generator. NodeJS | TensorFlow | Python

- Designed and developed a **deep learning** full-stack application using **Express** and **Node.js** to encode image input from users and generate image-based captions
- Achieved image feature encoding by utilizing RESNET-50, a 50-layer pre-trained convolutional neural network, alongside developing, training and validating a Long Short-Term Memory recurrent neural network for caption generation, on a dataset of ~ 3000 images for caption generation using **Keras** and **TensorFlow**.

LEADERSHIP

Senator | Student Government Association | Wake Technical Community College Aug '22 –May '23

- Led and organized monthly networking events to facilitate integration of new students to institution.
- Advocated for well-being of students by being their representative in meetings with the institution's president.