

# Efthimios Vlahos

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## EDUCATION

### SUNY Stony Brook University

*MSc Applied Mathematics & Statistics, Concentration in Data Science*

**GPA:** 3.52/4.00

- Relevant Coursework: Machine Learning, Big Data Analysis, Data Structures and Algorithms, Linear Programming, Probability Theory, Numerical Analysis

### CUNY Hunter College

*Bachelor of Science Mathematics & Physics, Minor in Computer Science*

**GPA:** 3.7/4.0

- Relevant Coursework: Intermediate Mechanics, Quantum Mechanics, Linear Algebra, Abstract Algebra, Vector Calculus, Mathematical Analysis I & II

Stony Brook, NY

Aug 2021 – May 2023

Manhattan, NY

Aug 2016 – Jun 2020

## SKILLS

**Programming Languages:** Python, R, C++, SQL, Java

**Data Science & ML Tools:** TensorFlow, Keras, PyTorch, Scikit-Learn, NLTK, SpaCy, Hugging Face, Pandas, NumPy, SciPy, Statsmodels, Tableau, Power BI, Looker

**Cloud Computing & Big Data:** AWS (SageMaker, Lambda, EC2, S3), GCP (Vertex AI, Dataproc, Dataflow), Apache (Spark, Beam, Kafka, Hadoop)

**DevOps & MLOps:** Docker, Kubernetes, MLflow, Kubeflow, Airflow, Prometheus, CI/CD pipelines, Git, GitHub

## WORK EXPERIENCE

### Microsoft

*Data Analyst*

New York, NY

Nov 2023 – Present

- Pioneered NLP techniques for AI hallucination detection, improving content accuracy and model reliability, while addressing complex content challenges through strategic machine learning solutions.
- Managed data quality control to ensure high standards and integrity, and effectively communicated findings and strategies to stakeholders, fostering collaborative improvements.

### KPMG

*Data Analyst Intern*

New York, NY

Jun 2023 – Oct 2023

- Spearheaded the development of machine learning models for predictive analytics, driving enhanced data solutions for clients and applying NLP techniques for in-depth sentiment analysis and customer segmentation.
- Introduced innovative data-driven methodologies for business problem-solving, significantly advancing decision-making processes and extracting pivotal insights from diverse data sources.

## PROJECTS

### 2048 Game Deployment on AWS EKS-Fargate | [GitHub](#)

(Kubernetes, Docker, AWS CLI, Eksctl)

- Orchestrated 2048 game on AWS EKS-Fargate using Kubernetes and Docker, achieving scalable cloud gaming experience.

### Alzheimer's Generative AI Project | [GitHub](#)

(Python, TensorFlow, Keras, LSTM, GRU)

- Created a generative AI model for Alzheimer's research, employing LSTM and GRU networks for high accuracy.

### Chest Cancer Detection | [GitHub](#)

(Python, TensorFlow, MLflow, DagsHub, Docker, Flask, AWS)

- Developed an ML-powered chest cancer diagnostic tool, integrating MLflow and DagsHub, deployed on AWS.

### ChatBot Research Tool for Financial Insights | [GitHub](#)

(LangChain, OpenAI, NLP)

- Built an NLP-based ChatBot tool, leveraging LangChain and OpenAI, for dynamic news analysis and Q&A.

### SmartLift Analysis | [GitHub](#)

(Python, PCA, Fourier Transformations, Random Forest)

- Implemented a Random Forest model for exercise classification, using PCA and Fourier Transformations, with 98.51% accuracy.

### Higgs Boson Particle Detection Project | [GitHub](#)

(Deep Neural Networks, CERN LHC Data)

- Analyzed Higgs Boson particle data using deep neural networks, advancing research in high-energy particle physics.