# Michael Haidar

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## EDUCATION

**Vanderbilt University – Data Science Institute** **Nashville, TN**
*Master of Science in Data Science* August 2024 – May 2026

- Relevant Coursework: Probability and Statistical Inference, Data Science Algorithms, Generative AI Models

**California State University, Monterey Bay** **Seaside, CA**
*Bachelor of Science* (GPA: 3.5/4.0) August 2017 – May 2022
Majors: Computer Science & Psychology Minor: Mathematics

- Dean's List (2018-2022) | iOS App Competition Winner 2019
- Relevant Coursework: Advanced Machine Learning, Advanced Linear Algebra, Applied Probability, Non-Parametric Statistics, Calculus 1-3, Discrete Mathematics, Software Engineering, Design and Analysis of Algorithms, Differential Equations and Linear Algebra, & Cognitive Neuroscience.
- Alpha Kappa Psi - Chair of the philanthropy and professional committees

## SKILLS

**Relevant Skills**: Machine Learning, Data Analysis, Applied Mathematics, Data Visualization, EEG Data Analysis
**Related Platforms**: Python, Keras, Tensorflow, Pandas, Numpy, Matplotlib, Scikit-Learn, R, SQL, Java, SPSS

## EXPERIENCE

**Virtualitics Inc.** *AI powered data analytics defense contractor.* **Pasadena, CA**
*AI Data Engineer Intern – Federal Team* May 2024 – August 2024

- Implemented transformer-based embeddings to measure text similarity, aiding in tasks like document clustering, data integration, and duplicate detection.
- Developed and implemented ETL pipelines, increasing data collection efficiency from diverse sources and over 10,000 data points for the Department of Defense (DoD). Resulted in a funded project by the DoD.
- Integrated transformer models, such as BERT and GPT, into ensemble frameworks for text encoding.

**California State University, Monterey Bay.** *Brain-Computer Interface Lab.* **Seaside, CA**
*Research Assistant* February 2020 – February 2024

- Developed computer vision architectures with representation learning and supervised contrastive loss, in a team of five, and applied these architectures in time series analysis of electroencephalogram (EEG) data. Resulted in a publication at AAAI-24 conference.
- Built ML models with downstream clustering techniques that incorporated EEG data analysis methodologies. Resulted in over 70% accuracy of document retrieval.
- Played a key role in the development, improvement, and quality control of data sets.

**SC Planners** *Land-use development firm.* **Alhambra, CA**
*Data Engineer Intern* August 2022 – May 2023

- Developed and implemented pipelines for extracting data from various government websites, enhancing the efficiency of data ingestion by 80%.
- Leveraged data analysis skills to contribute to financial analysis, particularly in assessing the impact of urban regulations on investment programs.

## PROJECTS

**Fila** *A 3D printing marketplace where users are able to request and fulfill projects (print jobs) across the platform.*

- Designed and implemented core features for both the publisher and fulfiller workflows, including project creation, browsing, and request management in Java.
- Developed RESTful API endpoints using Springboot to handle user authentication, project requests, and profile management.
- Integrated Firebase for real-time data management and user authentication, ensuring secure and efficient user sessions.

## ADDITIONAL

- **Haidar, M.**, & Bruns, G. (2024). Neural Bookmarks: Information Retrieval with Deep Learning and EEG Data. Proceedings of the AAAI Conference on Artificial Intelligence, 38(21), 22864-22870. https://doi.org/10.1609/aaai.v38i21.30322
- **Haidar, M.**, Bruns, G., & Rubino, F. M. (2023). Neural Memory Decoding with EEG Data and Representation Learning. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2307.13181 (submitted to ACAIN 2024)
- Interests: golf, tennis, tinkering with computers