

# Yun Du

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Targeting **Full-time** positions starting from **June 2025**

Know me more from my personal website: 🏠 <https://yun.yydarling.top>

## Skills

**Programming Languages:** Python, MATLAB, SQL, JavaScript, HTML5/CSS3

**Frameworks & Libraries :** Numpy, Pandas, MNE, Tensorflow, React, TailwindCSS, Figma

**Operation System & Databases & Tools:** Linux, Windows, MacOS, MySql, Tableau, Jupyter notebooks, Git

## Experience

**Dr.Lei's Lab, Texas A&M University** | Department of Kinesiology

**Jan 2025 – June 2025**

*Research Assistant — MATLAB, MNE-Python, Pytorch*

*College Station, TX*

- **EEG Signal Preprocessing:** Conducted advanced EEG preprocessing using **MATLAB (EEGLAB)** and **Python (MNE, NumPy)**, including filtering, artifact rejection, and format conversion to ensure data quality for downstream analysis
- **Multimodal Neuroimaging Workflow Development:** Built a structural-functional analysis pipeline by integrating **FreeSurfer**-based thalamic nuclei segmentation with EEG **source localization**, enabling volumetric quantification and brain activity mapping
- **Neuro-AI Integration in Kinesiology (Core Contributor):** Led the modeling direction combining EEG signals with Kinesiology tasks; designed **neural network models** for movement-state classification, and explored **LLM**-based data augmentation and label generation strategies to enhance model performance
- **Scientific Collaboration and Publication:** Participated in EEG data acquisition and experiment management; co-authored literature reviews and contributed to high-impact research manuscript writing, with selected work submitted for publication

**AECOM** | [aecom.com](https://aecom.com)

**Aug. 2023 – Jan. 2024**

*Data Science Intern — Python, JavaScript, Vue, TailwindCss, Echarts, Node.js, Git*

*Sanford, FL*

- **Data Processing:** Collected, cleaned, integrated, extracted, and analyzed **60,000** traffic data records using SQL and Python, covering data on vehicle and pedestrian collisions, travel times, traffic volumes, etc.
- **Front-end Interface Development:** Designed and developed a website dashboard with **3** main pages: the main dashboard, a signup/login page, and an error page. Implemented seamless navigation and interaction, including around 20 interactive elements such as dropdown menus, buttons, and charts
- **Dynamic Data Visualization:** Developed dynamic transportation data visualizations with a total of **15** charts, including heatmaps, histograms, line charts, scatter plots, maps, and combined charts, to provide comprehensive insights and facilitate effective analysis

**Texas A&M Engineering Experiment Station** | [tees.tamu.edu](https://tees.tamu.edu)

**May 2022 – Dec. 2022**

*Student Assistant — Python, Pytorch, Machine Learning, Linux(Ubuntu)*

*College Station, TX*

- **Digital Signal Dataset Preparation:** Prepared a dataset of over **35,000** digital signal samples using Labelling
- **Transformer Model Optimization:** Configured the environment and fine-tuned hyperparameters for model training on predicting radar spectrum occupation dataset using HPRC
- **Test Accuracy Improvement:** Achieved a significant **10%** increase in test accuracy

## Projects

**Artificial Language Translator**

**Apr. 2022**

*Transformers, Tensorflow, Pandas, Numpy*

[🔗link](#)

- Designed and trained an AI translation model using multiple Transformers, improving prediction accuracy by **15%**. Optimized with Random Forest, achieving **80%** accuracy and a **20%** increase in translation speed

**My Math Apps Store**

**Mar. 2023**

*Typescript, React, Nest.js, MySQL, Yarn, Cucumber, Jest, Docker, Heroku, Git*

[🔗link](#)

- Collaborated with a team to develop an online math textbook store, integrating payment and content access with automated testing to ensure seamless functionality

## Education

**Texas A&M University**

**Aug. 2021 – May 2024**

*Master of Science, Computer Engineering - Computer Science Track*

*College Station, TX*

- **Awards:** GHC'23 Scholarship, Grad Pgm Fee/Schol-Fellowships, COSC Graduate Program Scholars

**Zhongnan University of Economics and Law**

**Sep. 2016 – June 2020**

*Bachelor of Management Science, Project Cost & Accounting*

*Wuhan, China*

- **Awards:** National Second Level Scholars, Sports Scholarships