

Yuyang Deng

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Current School: University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, U.S.A. **Expected Graduation Date:** May 2027

EDUCATION

University of North Carolina at Chapel Hill, Chapel Hill, NC

August 2023 – Now

Bachelor of Science in Computer Sciences

Bachelor of Science in Public Health in Biostatistics (UNC Gillings School of Global Public Health)

Data Science Minor

TECHNICAL SKILLS

Coding language: Python, R, SAS, Java, JavaScript, C,

Tools and Frameworks: Docker, R Studio, React, CSS, NodeJS, Jupyter, PyTorch, MatLab, Git, SQL

GitHub Page: <https://github.com/Gimmick12-DYY>

PROFESSIONAL EXPERIENCE

Research Assistant, UNC Gillings School of Global Public Health

March 2025 – Present

- Processed **clinical MRI datasets** through MATLAB to generate study images and data (ranging from cortical thickness to specific brain region labels) from distinctive pipelines as a member of **UNC Gillings' BIG-S2 Research Group**
- Utilized UNC Longleaf Cluster to compute parallel pipeline (**ANTs, AlphaFold3, TBSS**) batch jobs on over **100,000** patient data from clinical datasets (**HABS-HD, MCSA, UK Biobank**) for **multimodal neuroimaging-genetic study on Alzheimer's Disease**.
- Collaborated as a **Python backend developer** for an **ADRD Knowledge Graph** project that incorporated LLM models using OpenAI API to update research datasets and studies across the health metadata

Machine Learning Research Assistant, Duke University School of Medicines

May 2025 – Present

- Engaged in Neuroscientific research on **TR-PTSD** and **OCD** with biostatistical methods in **Duke's Suthana Lab**
- Collaborated on construction of a unity VR program using **C#** to track **OCD** patients' eye-gazing distance in real-life scenarios
- Computed large-scale mathematical models and machine learning functions using **Python (Torch framework)/MatLab/R** for research metrics (**MESOR, Entropy, Rhythmic Amplitude**) on **clinical trial data** of brain waves and activities

Research Technician, UNC Lineberger Comprehensive Cancer Center

Apr 2026 – Present

- Engaged in **epigenetic** research on **single-cell TF** and **human genome** with biostatistical methods in **LCCC's Jie Lab**
- Led on construction of data imputation/augmentation pipeline to solve **TF genome data sparsity**
- Computed large-scale mathematical models and machine learning functions using **Python/MatLab/R** for research metrics (**t-SNE, BW, UMI**) on **large-scale single cell data**

Corporate Strategic Data Analyst, NavInfo Co Ltd., Ltd.

July 2024 – August 2024

- Collaborated with the corporate strategy department to support business development initiatives using strategic analysis frameworks such as **BCG Matrix, SWOT, PESTLE, and Scenario Analysis**.
- Conducted mass market research for ADAS solutions and Smart cabins using Selenium tool and provided strategic solutions for the company's major **M&A decisions** based on current ADAS functionality and financial data
- Produced **internal H1 financial reports** for senior management team's decision-making on future strategies

PROJECTS

UNC CS Department: Brain Chip Interface Project

Participated in the **Brain-Computer Interface Chip Project** led by UNC's Infinite Brain Group as a **member of the verification team** (applied **Verilog** and **RTL** verification for the chip testing pipelines) **and leader of the project web dev team** (designed and maintained the project website using **NodeJS** and **Tailwind**).

AWARDS/HONORS

- **ASA DataFest at Duke University** Best Data Visualization Award – *March 2025*
- **UNC Dean's List** (FA 2023, SP 2024, FA 2024, SP 2025, FA 2025) – *June 2025*
- **British Biology Olympiad (BBO)** Global Gold – *April 2022*
- **USA Biology Olympiad (USABO)** Global Silver – *April 2022*
- **UK Chemistry Olympiad (UKChO)** Global Bronze – *January 2022*

Languages: English (Native), Chinese (Native), French (Beginner)