

# ELIFIA MUTHIA

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## EDUCATION

**School of Engineering & Applied Science, Columbia University** | New York, NY Expected May 2025

*MS in Computer Science*

**Barnard College, Columbia University** | New York, NY Expected May 2024

*BA in Computer Science* (Track: Intelligent Systems)

GPA: 4.00

- **Dean's List:** All Semesters (Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023)
- **Relevant Coursework:** Artificial Intelligence, Introduction to Robotics Engineering, Computational Aspects of Robotics, Linear Algebra, Applied Statistical Computing, Advanced Programming in C, CS Theory

## TECHNICAL SKILLS & LANGUAGES

**Technical:** Python (Numpy, Pandas, PyTorch, Jupyter, Flask) | R | SQL | MySQL, PostgreSQL | AWS S3, Redshift, Sagemaker | C | Java | Git | HTML/CSS/JavaScript | REST APIs | JSON | MATLAB | Node.js | React | Linux | Atlassian

**Languages:** Indonesian (Native) | Chinese (Elementary)

## PROFESSIONAL EXPERIENCE

**Emerest Connect** | *Data Analyst, Part-Time* | New York, NY

Oct. 2022 - Present

- Developed 10 automated **Python** scripts to generate routine reports for the nursing and social work department, streamlining the delivery process to insurance companies.
- Collaborated closely with various departments (software development, nursing, and social work) to plan and establish an efficient data infrastructure, ensuring smooth data flow across the organization.
- Implemented an incremental **ETL** pipeline that loads data from **AWS S3** buckets into **Redshift** using **AWS Lambda** functions, optimizing data handling and storage.
- Contributed to the planning and design of data storage and table structures in **Redshift**, providing valuable insights for efficient organization and shaping of data to support effective querying and analysis.
- Utilized **Jira** and wrote extensive documentation on **Confluence** outlining processes, workflows, and system configurations to ensure clear understanding and facilitate seamless knowledge transfer within the organization.

**Barnard Programming Languages Lab** | *Research Assistant* | New York, NY

Jan. 2022 – May 2023

- Awarded \$6000 by the Summer Research Institute to lead a team of researchers working with Columbia's Neurological Institute to measure tremor severity in movement disorders.
- Refactored legacy **MATLAB** code to behave as a command line tool for seamless back-end execution.
- Developed a user-friendly front-end web interface using **HTML/CSS/Javascript** to collect patient information.
- Implemented a **Node.js** web server, facilitating the connection between **MATLAB** code and the web interface enabling computation of patients' degree of severity in tremors and for tracking treatment progress.
- Resolved data verification issues and performed fuzz tests to ensure accurate and consistent results across various machines and software versions after software migration.
- Presented the product to Dr. Seth Pullman, our client, for evaluation and potential integration into his practice.

**Private Tutor** | *Mathematics and Computer Science* | New York, NY & Jakarta, ID

Dec 2019 – Present

- Tutored students at grades 3-12 for 2-4 hours a week on Mathematics and Computer Science.
- Enabled 3 students attain perfect scores in AP Computer Science A, AP Calculus AB, and IB Computer Science.

## PROJECTS

**Goodreads Unwrapped** | New York, NY

2023

- Developed a website using **React** and **Flask** to analyze user reading habits on Goodreads.
- Used **Selenium** and **BeautifulSoup** to scrape complete goodreads shelves.

**Client Management** | Jakarta, ID

2019

- Designed and programmed a functional local app using **Java** with **MySQL** database running in the back-end.
- Met and consulted with the client, a Notary Public, for evaluation and eventual adoption to her practice.