Zoubida Rezki

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EDUCATION

BSc in Computer Science **Aug 2021 - May 2025 (Expected)**
University of Houston, Houston, TX **GPA:** 3.4
Double Minor in Mathematics and Data & Society
Relevant Coursework: Software Design, Algorithms & Data Structures, Automata & Computability, Operating Systems, Computer Org & Architecture, Programming & Data Structures, Data Science I.

WORK EXPERIENCE

Python Developer **Jun 2024 - Currently**
Gul.H.Zerze Lab (GHZ lab) University of Houston, Houston, TX

- Developed custom filtering and alignment methods using Python for sequence alignments and clustering of 60 protein sequences, ensuring data integrity and comprehensive analysis across multiple datasets, enhancing research accuracy.
- Automated data analysis for 120 DCD and CSV files using Python and bash scripts, utilizing GPU and high-memory Linux clusters, resulting in efficient data processing and plotting for 60 proteins, reducing processing time by 50%

Webmaster **Aug 2023 – Currently**
UH Cougarettes University of Houston, Houston, TX

- Upgraded website using HTML, CSS, and JavaScript to integrate events calendar and Instagram feed, resulting in a 10% increase in event turnout by improving accessibility to event information for over 30 visitors.
- Organized and taught 8 leet code workshops of 8-12 students, enhancing their understanding of algorithms and data structures, leading to a 25% increase in member turnout and 80% of participants saw an improvement in coding skills
- Collaborated with a team of 9 officers to promote coding education in a supportive environment for women, leading to a 40% increase in programming skill confidence among members.

Software Engineer **Sep 2023 – Mar 2024**
Computational Biomedicine Lab (CBL) University of Houston, Houston, TX

- Developed and deployed an incremental learning model using Python, improving the accuracy of diagnosing pediatric conditions by 3%.
- Built a secure website using Flask, MongoDB, and AWS for 50 clinicians to log and review clinical data, enhancing data organization and accessibility.

Undergraduate AI/ML Research Assistant **May 2023 – August 2023**
Computational Biomedicine Lab (CBL) University of Houston, Houston, TX

- Enhanced facial recognition accuracy by 2.5% using TensorFlow, OpenCV, and scikit-learn, and reduced inference time by 84.2% through optimization techniques.
- Reduced storage size by 96.9% by applying an inference schema and k-means clustering to select the most informative data for inference tasks.

Undergraduate Student Assistant AI Researcher **Jan 2023 – May 2023**
CAHSI University of Houston, Houston, TX

- Evaluated ML models using Anova and T-test to identify the optimal model for human body part recognition, streamlining the project workflow.
- Processed 2000+ images for model performance evaluation, producing essential ground-truth annotations that were crucial for accurate model assessments.

PROJECTS

Heatwave prediction project (Women in Data Datathon):

- Developed JavaScript scripts to retrieve and filter weather prediction data for the Mediterranean region, improving data accuracy and relevance.
- Optimized front-end data presentation, contributing to a website predicting heat health risks, enhancing user experience.
- Collaborated with a team to develop a user-friendly interface, increasing public awareness of heat health risks.

Site link: https://nimraonline.github.io/HeatHealthHub/index.html
Github Repo: https://github.com/NimraOnline/HeatHealthHub

SKILLS & Languages

Programming Languages: Python, Java, C++, JavaScript, Dart, Rust, SQL (Postgres)
Technologies: TensorFlow, PyTorch, OpenCV, scikit-learn, Anaconda, React, Next.js, Flutter, Flask, Actix, AWS, MongoDB
Tools: Visual Studio Code, PyCharm, Linux/Ubuntu, Bash, Windows, MS Office (Excel, Word), Visio, SharePoint
Professional Skills: Agile Software Development, Performance Tuning, Analytical Skills, Problem-solving, Verbal and Written Communication, Organization, Multitasking