

Taha Al-Nufaili

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EDUCATION

University of Maryland, College Park

Expected: May 2024

B.S in Computer Science & Minor in Statistics

GPA: 3.7 / 4.0

Coursework: Advanced Algorithms, Intro to ML, Advanced Data Structures, Intro to Data Science, Handheld Systems (IOS), Computer Vision, Computer Systems Architecture, Web App Dev, Game Dev, Statistical Computing

Full-ride KGSP scholarship, a highly competitive award, awarded yearly to 100 students.

SKILLS

Coding: Python, Swift, JavaScript, Java, C#, C, Ruby

Data/ML: Keras, PyTorch, Pandas, SKLearn

Cloud Databases: Firebase, MongoDB

Front-end: SwiftUI, React, NodeJS

Tests: 841/850 on CodeSignal's General Coding Assessment

WORK EXPERIENCE

Application Developer Intern (mascot-vis.github.io)

Human-Data Interaction Group

College Park, MD | Sep 2023 - Now

- Working in a team of 3 on Mascot.js, an SVG & WebGL data visualization API, using JavaScript and React.

Research Intern (shorturl.at/fuN39)

KAUST AI Initiative

Thuwal, SA | June 2023 - Aug 2023

- Led a team of 3 to design a benchmarking pipeline for multi-modal Large Language Models (LLMs), creating an object-oriented structure to encapsulate any model for seamless integration.
- Added CUDA batch inference to enhance performance of 3 HuggingFace LLMs on NVIDIA GPUs in a remote cluster.
- Employed Natural Language Processing (NLP) techniques to evaluate LLMs on object and action recognition tasks.

Machine Learning Intern (shorturl.at/kqEX7)

NASA Harvest

College Park, MD | Feb 2023 - May 2023

- Utilized the Google Earth Engine API for satellite imagery processing and data extraction.
- Leveraged statistical knowledge for feature selection using Random Forest and 20+ custom Separability Metrics.
- Utilized Random Upsampling to balance data, then built a 1D CNN model in TensorFlow and evaluated by F-1 scores.
- Presented results to 30+ people on stage at the Global Sustainable Development Congress 2023.

Software Engineer Intern

Science Systems and Applications, Inc. (SSAI)

Lanham, MD | Jun 2022 - Aug 2022

- Collaborated with NASA scientists to develop deep learning cloud-detection neural networks using Keras, on 18 features.
- Achieved 6X faster processing by applying multi-threading and managed a 5-million-observation dataset with Xarray.
- Used Matplotlib & Bokeh for visualization and DVC for optimization; presented findings to 50+ people at SSAI.

PROJECTS

Open-Source Web Portfolio Template (github.com/ta0a2000t/casuafolio)

Sep 2023 - Now

- Achieved 150+ downloads (50+ unique): Launched a React template, to present a well-rounded version of an individual.
- Facilitated ease of use for non-programmers by allowing full personalization through a single text file modification.
- Reviewed GIT Pull Requests from 3 contributors and managed 25+ GIT issues.

MIPS Processor Simulator

Nov 2021

- Created a cycle-accurate pipelined C program that reads and compiles MIPS assembly instructions.
- Implemented forwarding between stages in the 5-stage pipelined processor to reduce stalls.

Data Science Tutorial (ta0a2000t.github.io/)

Dec 2021

- Analyzed 2 real datasets in Jupyter Notebook, generating 20+ visualizations and 30+ code snippets, illustrating the ML lifecycle and EDA techniques with Pandas and Matplotlib.
- Showcased the steps needed to tidy messy data into easy-to-manipulate data frames using Pandas.
- Explored hypothesis testing, comparing single-variable to multivariable regression models using SKLearn.

Social IOS App

Aug 2023

- Incorporated Firebase for login authentication & real-time data syncing between local storage and Cloud Firestore.
- Implemented the MVVM design pattern in SwiftUI & Swift for a scalable and maintainable codebase.

VOLUNTEER

- Committed 3+ hrs/week to environmental conservation and 20+ hrs of mentorship at Bitcamp and Technica Hackathons.
- Supported community initiatives: scored 200+ MATHCOUNTS sheets and aided a church renovation in Austin, TX.