Anas Alhadi

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EDUCATION

Dalhousie University

Jan. 2021 – May. 2025

Bachelor of Computer Science with Honours - GPA: 4.1/4.3

Halifax, NS

EXPERIENCE

Research Assistant

Apr. 2024 – May. 2025

Dalhousie University

Halifax, NS

- Worked under Dr. Samer Lahoud, an IoT networking expert on improving metadata compression in IoT packets.
- Developed the ability to effectively disern the contents of documentations, RFC standards and research papers.

Undergraduate Teaching Assistant

Aug. 2023 – Dec. 2024

Dalhousie University

Halifax, NS

- Managed 400+ student's git repositories incorporating the use of bash scripts in the process.
- Instructed on Systems topics including C programming, basic Computer Architecture and UNIX operations.
- Provided in-person guidance to students, ensuring clarity and comprehensiveness.

PROJECTS

$KeBaB \mid C++, SDSL \ Library$

Aug. 2024 – Present

• K-mer based breaking for finding Super Maximal Exact Matchings in a DNA reference.

Paper Code

- Collaborated with experts to implement improved algorithms used in the identification of certain patterns in the human genome.
- Assisted in the Testing and Debugging of a relativley large code base.
- Evaluated the performance of our implementation.

Dynamic Context Updating in SCHC | Python3, OpenSCHC, Scapy

Jan. 2025 – Present

• Conducted a study that significantly enhanced the performance of an compression protocol

Paper Code

- Introduced a novel dynamic rule updating algorithm for the SCHC protocol and integrated it into existing implementations of the protocol.
- Built an emulation testbed that was used to evaluate performance of the implementation under extereme network stress.

Advanced Data Structures | GoLang, Python3

Aug. 2023 – Apr. 2024

• Collaborated with a classmate to implement and analyze non trivial data structures.

<u>Contact</u> <u>Code</u>

- Implemented: Splay Trees, Van Emde Boas trees.
- Evaluated performance by stress testing the Data structures and compared results against the theoretical limits.

TECHNICAL SKILLS

Languages: C, C++, Java, Python3, SQL, GoLang, JavaScript

Developer Tools: Scapy, Git, Docker, WireShark, Makefile, GDB, RiotOS

Frameworks:: Flask, Espresso, JUnit, Nodejs

Markup Languages: LaTeX, Markdown, HTML, CSS

Awards

Sexton Scholar: Awarded each semester to students with a 3.85 or higher GPA on a full course load, achieved 6 times.

Dean's List: Awarded each semester to students with a term GPA between 3.4 and 3.84 while on a full course load, achieved twice.

Oman MoHE Scholarship: Awarded to the top performing highschool students in the country, includes 4 years of paid university tuition.