

Tarek Aloui

(617) 685-9773 | taloui@college.harvard.edu | [linkedin.com/in/tarek-aloui](https://www.linkedin.com/in/tarek-aloui) | github.com/TarekAloui

EDUCATION

Harvard University

Bachelor of Arts in Computer Science with a Statistics secondary,

Cambridge, MA

Sep. 2020 – May 2024

Select Courses: (● Graduate Level Course):

Data Structures and Algorithms, Probability, Statistical Inference, Machine Learning, Reinforcement Learning, Introduction to Data Science (●), Advanced Topics in Data Science (●), Stochastic Processes, Quantitative Finance, Systems Programming, Abstraction & Design in Computation, Introduction to Theoretical CS

TECHNICAL SKILLS

Programming Languages: C/C++, JavaScript, Python, R, SQL, Rust, OCAML, C#, XAML, Java, HTML/CSS

Developer Tools & Frameworks: Pytorch, Pandas, Numpy, React, Linux, Actix-Web, Git, Docker, Xamarin, Firebase

Languages: English (fluent), French (conversational), Arabic (native)

EXPERIENCE

Undergraduate Researcher

Apr. – Aug. 2021 | May. – Aug. 2022

Harvard VLSI-Arch Group | *DNN Resiliency Research*

Cambridge, MA

- Added a number system conversion layer to [Goldeneye](#) (DNN resiliency tool based on Pytorch)
- Implemented a simulated mixed-precision inference feature in [Goldeneye](#)
- Wrote the [Goldeneye](#) documentation using **Sphinx**
- Currently building a better Design Space Exploration framework within [Goldeneye](#) (faster search algorithm, easier customization)

Fullstack Intern

March – Jul. 2021

Reedz | *An Arabic podcasts and book summaries app*

remote

- Built Podcaster, a platform for hosting podcasts using **React** (frontend) and **Actix-Web/ Rust** (backend)

Software Engineer Intern

Jun. – Aug. 2020

Kaoun | *Financial Technology Startup*

Tunis, Tunisia

- Created an SMS timer **React Native** Component, handled network errors across the app and improved memory management using **Redux**
- Learned to use version control software such as **git** and collaborate efficiently with a team of diverse skill sets

Software Engineer Intern

Jul. 2017 – May 2018

Novavision-IT | *Software Development Agency*

Gabes, Tunisia

- Built a cross-platform app with **Xamarin/ C#** (Android and IOS) which uses a facial features detection API

PROJECTS

[Read4me](#) | *Python, Android, Raspberry Pi, Tesseract OCR, Firebase, Google Cloud*

Feb. 2017 – May 2018

- Built an IOT device and an Android application that allow blind people to listen to paper books in 90+ languages using text recognition (**Tesseract OCR**) and **Google Cloud Translation API**
- Implemented a conversational interface using **Android's** speech recognition and **DialogFlow API**

[Chronological Dating of Historical Texts Using RNNs](#) | *Wolfram Language*

Jul. 2018

- Built recurrent neural network using Wolfram to predict the historical era of a textual excerpt

AWARDS

John Harvard Scholar

Oct. 2021

- Top 5% of the sophomore class based on the end-of-first-year GPA

Intel International Science and Engineering Fair (Embedded Systems category)

May. 2018

- First Tunisian to receive a Grand Award at the biggest pre-collegiate science fair in the world (1800 finalists)

PUBLICATIONS

- Abdulrahman Mahmoud, Thierry Tambe, **Tarek Aloui**, David Brooks, Gu-Yeon Wei. 2022. "[GoldenEye: A Platform for Evaluating Emerging Numerical Data Formats in DNN Accelerators](#)," *2022 International Conference on Dependable Systems and Networks (DSN)*, Baltimore, Maryland 2022.