

Curriculum Vitae

Fatima Shalhoub

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Education

Bachelor of Engineering in Computer and Communications Engineering 09/2019 – 07/2024

Antonine University

- GPA: 90/100

Honors

Undergraduate Top Performer

2023

Research Interests

My main research interests lie at the intersection of AI, HCI, and NLP, with a particular fascination for generative AI, but it's not limited to these fields. This interest has been the main motive for me to apply for research opportunities and pursue graduate-level studies. I am mainly attracted by the potential ability of AI to revolutionize many domains. Consequently, one of my scholarly questions center about leveraging generative AI in the realm of education and healthcare.

Research Experience

- **AI Researcher – Antonine University** **2/2024 – Present**
Imagined speech encoding and Brain-Computer Interfaces.
My work presents a novel approach to EEG-based imagined speech classification, focusing on enhancing both performance and efficiency. The proposed framework combines Spiking Neural Networks with traditional classification models. SVM and Gradient Boosting are suggested after applying PCA for feature extraction. In this way, we benefit from the efficiency of spike-based processing with the robustness of conventional classifiers while keeping an eye on the efficiency and resource consumption. This approach opens the horizons for imagined speech synthesis, thus giving a new hope for everyone with speech disability to be able to express their thoughts again. At the end of the research, we are planning to publish our work into a paper after yielding the expected results.

- **Personal Research**

As a research enthusiast, I've performed a review for a number of papers that I've read in the domain of Communications and Wireless Image Transformation. Besides, I've proposed extensions to connect the ideas together and bridge the gaps I've noticed in the span of the papers. This was a chance for me to learn LaTeX and document my readings.

Professional Experience

- **Reboost – Web Developer** **11/2023 – 01/2024**
 - Development of trendy and customized websites using React.js
 - Testing and assuring the ergonomic features of the websites.
 - Identify problems uncovered by testing or customer feedback, and correct problems or refer problems to appropriate personnel for correction.
 - Document technical factors for later reference.
 - Recommend and implement performance improvements.
 - Continuous learning of new technologies in a project-based manner.
- **BtekUp – Web Developer** **07/2021 – 08/2021**
 - Hands-on experience through the process of design, development, and testing of a technology agency website.
 - Working on GitHub and used it to sync the work with the team.
 - Learning react.js online to use it in the development.
 - Development of the website and launching it online.

Skills

- **Hard Skills:** JavaScript, React.js, Python, PHP, Laravel, Java, C++, Git, .NET, MATLAB
- **Soft Skills:** Time Management, Communication, Bilingual, Research

English Test Score

- **Toefl iBT:** 108/120 **03/2024**
- **Duolingo English test:** 140/160 **12/2023**

References

- **Mr. Melhem Dirani**
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- **Prof. Elias Choueiri**
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- **Dr Adib Haddad**
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