Taha Koleilat

LinkedIn — GitHub — Website

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Education

- **Concordia University** — Montreal, QC
  PhD in Electrical and Computer Engineering — *May 2024 – Present*
- **Concordia University** — Montreal, QC
  MSc in Electrical and Computer Engineering — *Sept. 2023 – Apr. 2024*
  - **Thesis**: MedCLIP-SAM: Bridging Text and Image towards Universal Medical Image Segmentation
  - **Relevant Courses**: Medical Image Processing, Applied Machine Learning and Evolutionary Algorithms, Biological Signal Processing, Deep Learning
- **American University of Beirut** — Beirut, Lebanon
  BEng in Computer Engineering; Minor in Economics; GPA: 4.0/4.0; High Distinction — *Aug. 2019 – May 2023*
  - **Thesis**: Covid-19 Indoor Access Rules Verification using ML (Won Dean's Award for Creative Achievement)
  - **Relevant Courses**: Introduction to Machine Learning, Cryptography and Network Security, Software Engineering, Advanced Optimization Techniques

Experience

- **Aritificial Intelligence Engineer** — Apr. 2024 – Present
  Radical AI — *New York, USA*
  - **Dev Environment**: Leveraging technologies such as OpenAI and Google Gemini for developing AI tools
  - **Workflows**: Developing ReX, an AI Coach who serves as a steadfast career companion for learners, offering personalized coaching, mentorship, and support throughout the various phases of their career lifecycle
- **Graduate Research & Teaching Assistant** — Sep. 2023 – Present
  Concordia University; IMPACT and Health-X Labs — *Montreal, QC*
  - **Research Objective**: Investigating novel methodologies for Deep Learning in Medical Applications
  - **Model Training**: Implementing Multimodal Language-Image Networks for Biomedical Data Representation
  - **Image Segmentation**: Developing data-efficient segmentation methods for medical images through pseudo-masks
- **Research Intern** — May 2022 – Oct. 2022
  Queensland University of Technology; Trusted Networks Lab — *Brisbane, Australia*
  - **Research Objective**: Developing a novel Consensus Protocol for Supply Chain Scenarios utilizing Email services
  - **Application Development**: Developing a dApp integrating Email services with deployed Solidity Smart Contracts to automate the voting process

Publications

Koleilat, T., Asgariandehkordi, H., Rivaz, H., & Xiao, Y. (2024). MedCLIP-SAM: Bridging Text and Image Towards Universal Medical Image Segmentation. The 27th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)

Projects

- **AUBCOVAX**: Developed an Android mobile application using Android Studio and Java to handle COVID-19 data for faculty, staff, and students through MongoDB.
- **ChainMed**: Implemented a secure medical record system using IPFS and Quorum Blockchain, ensuring confidentiality through encryption protocols, integrity, and availability of EMR's through decentralization.
- **Facial Expression Recognition**: Implemented explainable emotion recognition, utilizing techniques like Shapley value interpretation. Deployed on OpenCV for Real-time Recognition via a Python Flask Web Server.

Skills

Languages: Java, Python, C/C++, SQL, JavaScript, Solidity, R, LaTeX
Frameworks: PyTorch, TensorFlow, Django, Flask
Developer Tools: Git, Docker, Google Cloud Platform, Overleaf, Visual Studio, PyCharm, IntelliJ, Eclipse, Excel
Libraries: OpenCV, Scikit-learn, pandas, NumPy, Matplotlib