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Jihan Ghanim
Machine Learning Engineer



SUMMARY

A dedicated graduate student, majoring in Machine Learning and Artificial Intelligence, seeking an opportunity to enrich my technical and research skills. Currently researching in deep learning, reinforcement learning, and power. Also possesses experience in natural language processing and computer vision. Passionate to solve challenging problems in the field of AI.

PROFESSIONAL EXPERIENCE

Graduate Research Assistant | AUB Human and Machines Research Lab

Feb '21 - Present

An Asymmetric Loss with Anomaly Detection LSTM Framework for Power Consumption Prediction (accepted for publication in IEEE Melecon Conference)

- Literature review on ML algorithms with asymmetric loss functions and Anomaly Detection
- Developed multiple LSTM models with various asymmetric loss functions which effectively minimized underpredictions
- Performed a clustering-based anomaly detection technique to remove any present outliers prior to models' training resulting in better load forecasts
- Evaluated the proposed approach on three datasets based on the root-mean- squared error (RMSE) results

A Trustworthy Reinforcement Learning Approach for Power Grid Management, Thesis

- Current research work on managing power grids using an RL technique with a human in the loop

Graduate Teaching Assistant

Jan '22 - Apr '22

Computer Organization Laboratory

- Assist in teaching students to use Vivado and MPLAB softwares and to write VHDL and assembly codes

Graduate Teaching Assistant

Sep '20 - Dec '21

Introduction to Programming Laboratory

- Detected plagiarism in the students' programming assignments using JPlag software and generated a report of the findings

EDUCATION

M.E. in Machine Learning and Artificial Intelligence| 3.95/4 GPA

Sep '20 - Present

American University of Beirut

Beirut, Lebanon

Granted institutional accreditation by the Commission on Higher Education of the Middle States Association of Colleges and Schools in the United States

- Main Courses: Introduction to Machine Learning, Neural Networks, Topics in AI (RL), and Advanced Optimization Techniques

B.E. in Power and Machines (ABET Accreditation)| 3.58/4 GPA

Sep '15 - Jun '20

Beirut Arab University

Debbieh, Lebanon

- Final Year Project: Automated Hydroponics System using PLC

KEY SKILLS

• Natural Language Processing • Computer-Vision • Deep Learning Algorithms • Reinforcement Learning Algorithms • Research • Excellent interpersonal and communication skills

SOFT SKILLS

• MATLAB • C programming • Python • Keras • Scikit-learn • TensorFlow • Pandas • Matplotlib • NumPy • SciPy

Relevant Course Projects

Deep Multi-task Learning Approach for Bias Mitigation in Arabic Hate Speech Detection

- Conducted a literature review on bias mitigation approaches in natural language processing and hate speech detection techniques in the Arabic language

- Performed hate speech detection using deep learning (LSTM) and reduced identity bias using multitask learning
- Applied eli5 explainable AI tool to visualize bias mitigation

Automated Face Recognition of Powerful Leaders on the News

- Created a dataset containing images of the targeted presidents
- Trained a ResNet50 model using pre-trained weights on VGGFace2 and used confusion matrix to evaluate its performance

ADDITIONAL ML COURSE PROJECTS

- **Automated Image Captioning**
- **Neural Machine Translation**
- **Arabic Song Conversion Using GANs and Transfer Learning**
- **Movie Recommendation System**

LANGUAGES

- Proficient English and native Arabic

EXTRACURRICULAR ACHIEVEMENTS

- Participated in Hult-Prize Competition and reached the finals which enhanced my teamwork, and entrepreneurship skills | '18