HAZEM NOMER

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I am an independent machine learning researcher, interested in deep learning and recurrent neural nets. I used recurrent nets (LSTM) in different data science projects as forecasting stock returns, adaptive user interfaces, news headlines generation and recommendation. My early projects were music players and web browsers, I also created "WNPlay" an on-line games website. I have a BSc. in computer science from Faculty of Science, Alexandria University. Now, I am MSc. student at the same university.

EDUCATION

FACULTY OF SCIENCE – ALEXANDRIA UNIVERSITY

Bachelor of Science (Computer Science and Statistics) (2012-2015)

- CGPA: 3.03 **(Very Good)**
- Graduation Project: **Adaptive user interfaces (Java and Android)** Grade: **A**
  Used Recurrent Neural Networks (RNNs) to adapt mobile UIs to user needs.

Currently pursing MSc. In Computer Science (2015-Present)

PROJECTS

- **News Headlines Generation** Python (June 2016)
  A news headlines generator using long-short term memory.
- **MouseRNN** Python (June 2016 - Present)
  Mouse actions tracking and prediction using recurrent neural networks. The model predict mouse position and action. The model uses on-line training with user data.
- **Emotion Recognition** Python (March 2016)
  An Emotion recognition app using Convolution neural networks. (A graduation project mentor at Faculty of Science – Alexandria University)
- **Deep Algorithmic Trading** Python (June 2016- Present)
  Prediction of stock market returns using deep learning techniques.
- **Stack LSTM** Python (April 2016- Present)
  Teaching LSTM and GRU (Gated Recurrent Units) to act as Stacks.

- **GraLib** Java (May 2015)
  A simple graph library in java, implements basic graph algorithms (e.g. BFS, DFS, etc...)
- **Mars Scout** Unity 3D (March 2015)
  Developer of a 3D game simulates life on Mars Lava tubes. Won in NASA SPACE APPS hackathon – Human Category
- **Data structures** C (April 2013)
  Implemented stacks, queues, trees and graphs for CPU processes simulation and expression evaluation.
- **Image Compression using wavelets** MATLAB (April 2014)
- **Address Book** PHP-MYSQL (April 2013)
  A simple address book (a project for Structures of Programming Languages course)
- **Stor.ion: CRM software** PHP-MYSQL (June 2013- Feb 2014)
  A CRM software (locally hosted) manage inventory, bills, customers, etc...
- **3-SAT Solver** PHP (Dec 2013)
  A brute force algorithm for solving 3-SAT problem
- **Fibonacci Sequence Graphics** OpenGL (Dec 2013)

ACADEMIC

Interests: machine learning, deep learning, recurrent neural networks, natural language processing, semantic web and intelligent user interfaces.

1. A Review titled **"Recursive Neural Networks Review"**, June 2016.

ARTICLES

I write articles about artificial intelligence hosted on my blog

LANGUAGES

- I coded in C, C#, PHP, Java, and Python.
- I used HTML5, CSS3, JavaScript, MYSQL, XML, and RDF.
- I learned: Ruby.
- Familiar with: LINUX System administration.

AWARDS

NASA SPACE APPS Cairo Local winner in Human challenge held at Nile University in April 2015.

VOLUNTEER WORK

- **IEEE Alexandria Student Branch** Website committee volunteer (January 2015 – January 2016)
- Technical Committee Head at **Robabkia Team** (March 2015 – October 2015)
- I gave a 5-days workshop "Web development" at **Egyptian Syndicate of Scientific Professions – Alexandria** (March 2014)
- IEEE Alexandria Student Branch **ITW '15 Conference** Presenter. (September 2015)