

CURRENT ADDRESS

1257 W Flournoy St
Chicago, IL
773-474-9825

Alessandro Rennola

alessandrorennola@gmail.com
linkedin.com/in/alessandro-rennola
github.com/arenn0

EDUCATION

Undergraduate: Polytechnic University of Turin; Turin, Italy
BS Computer Engineering. **GPA:** 4.0 equivalent (110/110)

Sep 2014 – July 2017

Graduate: University of Illinois at Chicago; Chicago, IL
MS Computer Science. **GPA:** 4.0

Sep 2017- Present

Relevant Coursework: Software Engineering (*OOP Programming, Agile software development, Android Programming*), **Neural Networks** (*Perceptron, Gradient Descent, LMS, Backpropagation, Associative Memory, Hopfield networks, SVN, PCA, Pattern Recognition, Classification, Prediction, Clustering*), **Deep Learning** (*Convolutional NN, GAN, LSTM, BiLSTM*), Databases (*Databases, Data warehousing, Database management system, Data Mining*), Big Data (*Hadoop MapReduce, Spark, Spark Machine Learning Framework, Spark Streaming Framework*), Information Retrieval (*Text classification and mining, sentiment analysis, index construction, scoring, weighting*).

WORK EXPERIENCE

Research Assistant, Information retrieval & Deep Learning

Jan 2019 – Present

University of Illinois at Chicago

- Using machine learning to extract accurate information from disaster related tweets. Develop scalable architectures and high performing frameworks to classify Informativeness in Disaster Related Tweets.
- Semi-Supervised approaches for Adversarial and Virtual Adversarial Training on BiLSTM-based text classification models.
- Significant improvement of Precision, Recall, Accuracy in comparison with their respective baseline using Machine Learning (SVM, NB) and Deep Learning (CNN, BiLSTM) models.

Teaching Assistant, Algorithms and Programming, Databases

Oct 2016 – June 2017

Polytechnic University of Turin

- Database: SQL (Oracle, MySQL), Relational Algebra, fundamentals of HTML and PHP.
- Algorithms and Programming: Algorithms, Data Structures (Lists, Trees, FIFO, LIFO and priority queues, Hash tables, Graphs) and advanced Problem Solving, including Combinatorics in C.
- Assist 300 students of "Database", "Algorithms and Programming" courses during laboratory hours on weekly basis.

RESEARCH EXPERIENCE

Tweet Actionability Classification

Flagging 'calls for help' to aid first responders

Sep 2018 – Dec 2018

- Two-person project. Our goal was to classify actionable information in tweets during disastrous events using an unsupervised approach.
- Our simple, but effective approach was able to rank tweets according to their actionability measure with a precision of 70% in the first 10 results. This is a good starting point, given that actionable information is considered as a classic 'needle-in-a-haystack' problem.
- Code: <https://github.com/arenn0/TweetActionabilityClassification>

ARM LandTiger V2.0 LPC1768

Oct 2017 – Mar 2018

Educational Library

- Two-person project that aims at exploring some functionalities and features of the ARM LandTiger development board: GLCD and the TouchPanel peripherals.
- These libraries are going to be used as a starting point for the laboratory classes of Advanced Computer Architectures at Politecnico di Torino. Coded in C and ARM Assembly. IDEs used: Eclipse and ARM Keil uVision.
- Code: <https://github.com/arenn0/LandTiger>

SKILLS

- **Python** (Fluent), **Java 9** (Fluent), **C** (Fluent), **TensorFlow**, **Tensorboard**, **SQL**, **Hadoop MapReduce**, **Spark**, **MATLAB**, **PHP**, **HTML 5**, **CSS**, **JavaScript**, **ARM Assembly**, **8086 Assembly**, **MIPS64**
- **AWS: EC2**, **Git**, **Github**, **Operative Systems & OS: Programming** (UNIX, UNIX Kernel, Windows)
- **Languages:** Italian (Native), English (Fluent – IELTS: Reading 8.5, Listening 9, Writing 6, Speaking 7)
- **Research, Leadership, Teamwork.**