

IBRAHIM SHARAF ELDEN

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WORK EXPERIENCE

- **K2 Intelligence, Remote Software Engineer - Applied Data Science (Jun 2017 – Present)**
 - K2 Intelligence (based in New York, US) for cyber defense services. Participates in multiple projects especially in data analytics, machine learning & NLP to analyze and enhance crawling engine performance.
 - Researched the detection of malicious domain names generated by Domain Generation Algorithm (DGA) using deep learning (LSTM) and Random Forest algorithm.
 - Created a tool to calculate similarity between DBpedia entities (50,000 entities in ~5 minutes) based on a set of extracted semantic and syntactic features.
 - Built a Slack bot on top of Securitybot (Dropbox) to help analysts track important crawling notifications.
 - Built clustering and classification models to detect content & out of context web-pages.
 - Developed an analytics module on top of crawled data for aggregation, filtering and visualization.
 - Tech stack: Python, Pandas, Scikit-learn, Gensim, fastText, MySQL
- **Floralytics, Remote Software Engineer (Sep 2017 – Jan 2018)**
 - Floralytics (based in Helsinki, Finland) is an early stage social listening platform.
 - Built scrapers and crawlers for social media platforms such as Twitter, YouTube.
 - Developed a full-text search engine for storing and retrieving social media text data.
 - Trained machine learning models to detect sentiment and emotion of social media text data.
 - Tech stack: Python, MongoDB, Elasticsearch, fastText, Gensim, Scikit-learn
- **Yaoota, Software Engineer - Data Mining (Nov 2016 - Aug 2017)**
 - MENA's premier shopping search engine. Worked on enhancing the crawling engine.
 - Built a log-files centralization pipeline for monitoring and visualization using Elastic Stack, resulting in a 90% decrease in overall monitoring time.
 - Extended, maintained and monitored Yaoota crawling engine to collect more online stores.
 - Enhanced Named Entity Recognition (NER) model to extract relevant features from products metadata.
 - Tech stack: Python, Scrapy, Docker, spaCy, Elastic Stack (Filebeat, Logstash, Elasticsearch, Kibana)
- **Yaoota, Software Engineering Intern (Sep – Oct 2016)**
 - Implemented multiclass text classification solutions, part of building intelligent web scrapers.
 - Tech stack: Python, Scikit-learn, Gensim, SpaCy, TensorFlow
- **Microsoft Research Cairo, Software Engineering Intern (Jul – Aug 2016)**
 - Intern with Bing team, built a dashboard to provide user engagement statistics for *Bing for Partners* portal.
 - Tech stack: C#, ASP.NET MVC 5, Entity Framework, SQL, HTML/CSS/JS, Power BI

EDUCATION

Ain Shams University

2013 – 2017

- B.Sc., Faculty of Computer and Information Science, Computer Science department

SELECTED PROJECTS

- **Clustering of Crash Reports:** An open source collaboration with Mozilla, a tool to calculate similarity between crash reports, then use the similarity results to build clusters of related crash reports.
- Tech stack: Python, Gensim, NumPy, Scikit-learn, Pytest
- **Paragraph Embeddings for Text Classification:** Analyzing sentiment using Doc2Vec algorithm for sentence embeddings and Random Forest algorithm for classification.
- Tech stack: Python, Gensim, Scikit-learn, NLTK, Pandas
- **Neural Conversational Model:** An open domain chatbot using Recurrent Neural Networks (LSTMs), trained on multiple dialogue corpuses such as Cornell movie-dialogs dataset.
- Tech stack: Python, TensorFlow, NumPy, NLTK

QUALIFICATIONS

- **Programming:** Python, SQL, C++, C#, Bash
- **Databases:** MySQL, SQL Server, MongoDB, Elasticsearch
- **Problem Solving:** Solved 500+ algorithmic & mathematical problems on multiple [online judges](#).
- **Open Source:** Contributes to [gensim](#), [pandas](#), [allennlp](#) & [OpenMined](#). All pull requests are listed [here](#).

EXTRACURRICULAR ACTIVITIES

- Founder & Admin of ([FCIS Knowledge Exchange](#)): Provides technical and career guidance for 6000+ college students from many universities around Egypt **(2017-Present)**
- Instructor in Machine Learning course at Faculty of Computers and Information Science - Ain Shams University, provided by acmASCIS Student with 50+ attendees. Explained Linear Regression, Gradient Descent ([session #2](#)) & Language Modeling for NLP ([session #5](#)) **(2017)**
- Founder of ([StudyGroups'17](#)): Curated learning paths for machine learning, backend & Android development to help 300+ enrolled students get summer internships **(2017)**
- Participated in ACM Egyptian Collegiate Programming Contest **(2015)**
- Head of Public Relations at [TREE](#) & [COMPASS](#) student activities **(2014-2016)**