# Ahmed Harbi

Machine Learning Research Engineer

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**Military Status** Postponed

## Experience

**2019-07 - 2019-07** — **Artificial Intelligence Analyst Trainee**, *IBM*
- Passing the IBM Academic Certificate Exam for Artificial Intelligence Analyst 2019 Mastery Award.
- Building Chatbots using IBM Cloud.
- Working with IBM Knowledge studio to get insights from PDFs and Word Files.
- Working with IBM Watson Assistant to increase the intelligence of the chatbots.

## Education

**2016-09 - 2021-07** — **B.Sc. in Communication and Electronics Engineering**, *Faculty of Engineering, Suez Canal University, (CGPA 2.24 / Good)*

Coursework: *Communication systems, Electronics, Waves, Satellite communication, Networks and Neural Networks.*
Graduation Project: *Pharmacy Smart System: Designed and implemented a deep learning-based software to detect and recognize handwritten medical prescriptions.*

**2013-09 - 2016-07** — **High School Diploma**, *Egyptian GCSE, Future Generation School, (96.52%)*

## Skills

- **Programming Languages:** *Python, C++, Java, and Matlab*
- **Python libraries:** *Numpy, Scipy, Pandas, Pytesseract, Flask, Pyserial, Pyrebase, PyQt, Levenshtein Editdistance and OpenCV*
- **Machine learning Frameworks:** *TensorFlow, Keras and Scikit-learn*
- **Software engineering practices and tools:** *Git, Firebase, IBM Watson and Linux*

## Projects

- **Prescription-HTR:** Handwritten text recognition system designed to detect and recognize drug names out of Egyptian medical prescriptions based on CRNN model, trained on IAM English Handwritten Words Dataset, followed by CTC decoding algorithm and a language model for spell correction. *(Python, OpenCV, TensorFlow, Editdistance).*
- **Morse Code Transmitter:** Arduino transmitter which converts English words into Morse Code then represent it in light and sound form with laser and buzzer, Arduino receives words through serial Bluetooth communication. Designed an android mobile application, and desktop application to communicate with Arduino, also implemented OCR to detect digital or printed English words then send it to Arduino. *(Python, C++, OpenCV, Pytesseract, PySerial, PyQt).*
- **ROV Vision System:** Image Processing system designed to detect shapes of triangles and rectangles underwater, detect colors of red, yellow and blue, and OCR model to detect printed tag of a drowned airplane to assist ROV identifying the airplane. *(Python, OpenCV, Pytesseract).*

## Courses & Certificates

- Artificial Intelligence Analyst – Mastery Award *(IBM)*
- Deep Learning Specialization *(DeepLearning.AI via Coursera)*
- Introduction to Artificial Intelligence *(IBM via Coursera)*
- Mathematics for Machine Learning *(Imperial College London via Coursera)*
- Full Stack Track *(1M Arab Coder via Udacity)*
- Data Visualization with Python *(IBM via Cognitive Class)*
- Data Analysis with Python *(IBM via Cognitive Class)*
- Python for Data Science *(IBM via Cognitive Class)*
- Introduction to Scripting in Python *(Rice University via Coursera)*
- Foundation of Everyday Leadership *(University of Illinois at Urbana-Champaign via Coursera)*

## Volunteering

**2019-08 - 2019-10** — **NASA Space Apps Cairo**, *Technical Support*

**2018-09 - 2019-09** — **IEEE Suez Canal University Student Branch**, *Chairman*
*Project manager for IBM Digital Nation Africa Innovation Day | Canal Event*

**2018-02 - 2019-04** — **Mate Arab Regional ROV Competition**, *Safety Judge*

**2017-12 - 2019-04** — **Fab Lab Ismailia**, *Makers Hunter*

**2018-08 - 2019-01** — **IEEEmadC**, *Student Ambassador*

**2018-06 - 2019-01** — **IBM Digital Nation Africa**, *Student Ambassador*

**2018-08 - 2018-10** — **NASA Space Apps Ismailia**, *Technical Lead*

**2017-06 - 2018-09** — **IEEE Suez Canal University Student Branch**, *Technical Member*

**2017-07 - 2018-08** — **SCU Racing Team**, *Software Engineer*

# Accomplishments

- Participant *(IEEEXtreme)*
- Participant *(IEEEmadC)*
- Participant *(NASA Space Apps 2017)*
- Ranked 11775/ 143352 *(ProjectEuler+)*
- Python gold level *(HackerRank)*
- Problem solving silver level *(HackerRank)*
- Statistics silver level *(HackerRank)*

# Languages

- Arabic - Native
- English - Highly proficient