Muhammad Salah Osman

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Github | LinkedIn

Master's student at Kyoto University of Advanced Science in Japan, I have professional experience in software engineering developing Backend RESTful APIs and React Native mobile applications. I have strong research experience in developing Deep Learning algorithms for satellite data in the domain of water quality monitoring.

EDUCATION

Kyoto University of Advanced Science — **Kyoto, Japan**
MS in Engineering, Research in Satellite Remote Sensing — *Sept. 2022 - Aug. 2024*
Super KUAS-E Scholarship Recipient.
Deep Learning algorithms for water quality monitoring using satellite data.

Alexandria University — **Alexandria, Egypt**
BS in Computer and Systems Engineering, CGPA: 3.3 — *Sept. 2016 - Jul. 2021*
Graduation Project: Deep learning system to generate music based on a given sentiment.

Hiroshima University — **Hiroshima, Japan**
Short-term cultural program — *Aug. 2019 - Sept. 2019*
Learned more about the Japanese language and the Japanese culture in Hiroshima.

PROFESSIONAL EXPERIENCE

Sansan — **Remote, Japan**
Software Engineering Intern — *Jun. 2023-Present*

- Working remotely with a global team of engineers to implement backend and frontend features in Sansan's Bill One product using Kotlin and Reactjs.

Kyoto University of Advanced Science — **Kyoto, Japan**
Teaching Assistant — *Sept. 2022–Present*

- Helping students with C Programming & grading assignments.

Rubikal, INC. — **Alexandria, Egypt**
Software Engineer — *Dec. 2020–Aug. 2022*

- Worked as a React Native Engineer on a food catering application.
- Developed Back End RESTful APIs using Ruby on Rails for several multinational clients.
- Participated in business decision-making from a technical design perspective.

Software Engineering Intern — *Jul. 2020–Sept. 2020*

Implemented an internal tool to handle food ordering inside the company using Ruby on Rails.

Chamber DS — **Remote**
Freelancer React Native Mobile Developer — *Aug. 2021–Apr. 2022*

- Working as a React Native Developer on a product for athletes called InnerPro in the US.

Alphaya.com — **Remote**
Freelancer software developer — *Apr. 2018–Aug. 2018*

- KALILA project: Javascript application to compare multiple Arabic texts using DIFF and parsing algorithms.

Personal Projects

- 1D Convolutions and LSTM Deep Learning model for estimating Chl-a in the water from satellite data.
- Multi-view Knee MRI diagnoses classification using VGG16 Convolutional Neural Network.
- Implementing Artificial Neural Network in C language.
- PintOS: Implementation of a Unix Like operating system in C.
- Sotra: a Mobile Application for laundry requests and services build using a stack of PostgreSQL, Ruby on Rails, and React Native. The app was launched in Egypt and operated in the market for three months.
- Desktop mail server using Socket Programming on a LAN with file system storage built using Java.
- JDBC & DBMS implementation in Java.
- Dots and Boxes: an implementation of the game in pure C with GUI and MinMax with alpha-beta pruning algorithms.

Technical Skills

Programming Languages

Python, C/C++, JavaScript, TypeScript, Kotlin, Java, Ruby

Frameworks & Technologies

- Keras, Tensorflow, Deep Learning
- Numpy, Matplotlib, Pandas
- React Native, Redux, Cross Platform Mobile Development (Android & IOS)
- Ruby on Rails, RESTful APIs, Databases, Back-end development
- Docker, Containerization, AWS

General Skills

- OSx, Linux, Git
- Project Management, Finance, Economics
- Agile, JIRA, Testing & Debugging

Courses

- Coursera: Machine Learning (Andrew Ng)
- Coursera: Deep Learning Specialization
- Intro to Neural Computation (Dr. John A. Bullinaria)
- BerkeleyX: CS188 Artificial Intelligence (Edx)
- Finance for Non-Finance Professionals (Rice University)
- Udacity: App Marketing (Google)
- Microeconomics Principles (University of Illinois)

Achievements & Activities

- Second place best in category in Intel BASEF (2016).
- Second place in Hult Prize Alexandria on-campus for our environmental solution: Plantopia (2019).
- ACM Student Chapter Academic Head (2018).

Publications

- Muhammad Salah, Hiroto Higa, Joji Ishizaka, and Salem Ibrahim Salem, 1D Convolutional Neural Network-based Chlorophyll-a Retrieval Algorithm for Sentinel-2 MultiSpectral Instrument in Various Trophic States, Sens. Mater., Vol. 35, No. 11, 2023, p. 3743-3761.
- M. Salah, H. Higa, J. Ishizaka and S. I. Salem, "B1D–CNN: A Novel Convolution Neural Network-Based Chlorophyll-A Retrieval Algorithm for Sentinel–2 Data," IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, Pasadena, CA, USA, 2023, pp. 3950-3953, doi: 10.1109/IGARSS52108.2023.10281795.