

CURRICULUM VITAE

Reem Ali Alghamdi

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EDUCATION

- 2020 – current **King Abdullah University of Science and Technology.**
MS Degree in Computer Science
Advisor: Prof. Xiangliang Zhang
GPA 3.91/4
I've taken courses in AI, data analytics, machine learning, deep learning, computer vision, scientific visualization, bioinformatics, numerical linear algebra, and probability and statistics in R.
- 2016 - 2020 **Princess Nourah Bint Abdulrahman University.**
Bachelor's Degree in Computer Science
First Class Honor, GPA 4.98/5

EXPERIENCE

- Jan 2021 – current **Teaching Assistant**
King Abdullah University of Science and Technology.
CS 201 – Introduction to Programming with Python
Professor: Malek Smaoui
Responsibilities: grading, one-on-one sessions to struggling students, making homework. The course is taught to PhD and MS students alike.
- Sep 2019 – Oct 2019 **Web Development Intern**
King Abdullah bin Abdulaziz University Hospital.
Monitor: Eng. Amal Alhammad
Responsibilities: Developing a web application using ASP .NET to help the Training department in their intern recruitment process.
- Sep 2016 – Jan 2020 **Volunteer Teacher**
Princess Nourah Bint Abdulrahman University.
I have taught all subject that I have taken to students. I have also completed an official 4-months volunteering work to teach students data structures.

TECHNICAL SKILLS

Programming Languages: C/C++, Java, C#
Scripting Languages: Python, HTML, CSS, JavaScript, PHP
Softwares: R, matlab
Databases: SQL, mySQL, postgresSQL, SQLite
Operating Systems: Linux, Mac OS, Windows, servers, Raspberry pi
Software development: REST API, Android and web and desktop and game developments

SKILLS

Languages: Arabic (Native), English (Advanced), Japanese (Good)
Personal Skills: Leadership, Time management, Responsibility, Problem Solving, Working Under Pressure, Flexibility

PROJECTS

Jan 2021 – May 2021

Scientific Visualization Projects

Computer graphics, scientific visualization, C/C++, OpenGL.

I made a moving cube with shading and lighting. For scalar field visualization: slice visualization, marching squares and marching cubes, volume rendering using raycasting and iso ray casting. As for vector field visualization: glyphs, streamlines, pathline visualization, and line integral convolution.

Jan 2021 – May 2021

Arabic Alphabet Sign Language Recognition

Computer vision, machine learning, deep learning, python, tensorflow, openCV, scikit-learn

The project aimed at making a model that combines classical computer vision techniques with deep learning methods. This was achieved by using CNN for the deep learning part and interest point descriptors with ORB, which was then turned into BoVW via K-means and trained with MLP model. The CNN model and the MLP models were then trained jointly.

Jan 2021 – May 2021

Using Siamese Network for Similar Kanji Retrieval

Deep learning, python, tensorflow

The project aimed at retrieving similar kanji by training a siamese network with triplet loss. Then comparing retrieval results of the siamese model with an autoencoder results.

Sep 2020 – Dec 2020

Bioinformatics Algorithms Projects

Bioinformatics, python

I've made 13 projects by applying many different algorithms, such as HMM, suffix arrays, clustering and more. The aim is to answer biological questions. Such as motif finding, antibiotic sequencing, genomes assembly, comparing biological sequences, evolutionary trees and so on.

Sep 2020 – Dec 2020

Breast Cancer Classification

Machine learning, statistics, R

The project aimed at classifying breast cancer data into benign or malignant using logistic regression. In addition to running some statistical tests and methods.

Sep 2020 – Dec 2020

Classifying Detective Conan Episodes Based On Rating

Machine learning, data analytics, python

In this project, a comparative study was made. The goal is to classify episodes as either high, low, or average rating. Many different machine learning algorithms were used, such as decision trees, k-nearest neighbor and so on.

Sep 2019 – May 2020

Home Automation Control System

IoT, android development, web developemnt, REST API, python, raspberry pi, java, SQLite

The aim is to control home appliance online. The methodology is simple: an android app will send controlling requests to a web server. Raspberry Pi will be getting all the new requests from the server, processing it accordingly and controlling the hardware components connected to it.

Sep 2019 – May 2020

Japana: Japanese Text Analysis

Web developemnt, CLI, desktop development, REST API, python, postgresQL

an open-source Japanese text analysis tool. It takes a Japanese text from file, URL or directly and returns the list of words ordered by their frequency from the text with their definitions, pronunciation and JLPT level. It was made into a python library, a command line interface, REST API, and web, desktop and mobile applications.

Sep 2016 – current

Mini Projects

I like programming. So I've done and learned many different frameworks, libraries, programming languages and more by making mini projects. Such as games, mobile apps, web apps, desktop apps, CLI and scripts. In addition to applying what I learn in classes, such as machine learning, deep learning, AI, computer graphics, bioinformatics and so on.