

# Khaled Jallouli

## Software Engineer Student Specialized in Data Science

### Personal Information

Name Khaled Jallouli

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Portfolio https://khaledjallouli.github.io GitHub https://github.com/Khaledjallouli

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### Education

Since October Master's degree, Information Systems, Technische Hochschule, Ulm, Germany.

2019

o Relevant Coursework: Predictive Analytics, Intelligent and Autonomous Systems, Model-Driven Construction of Complex Systems, Software Quality Assurance, and Information Security.

Since Engineer's degree, Software Engineering, National School of Engineering, Brest, France.

September 2017

o Relevant Coursework: Programming (C, C++, and Python), Unified Modeling Language, Database Management Systems, and Design of Interactive Applications (Mobile and Web applications).

2016–2017 Academic Exchange, Computer Engineering, Middle East Technical University, Ankara, Turkey.

o Relevant Coursework: Database Management Systems, Object-Oriented Programming (C++), Programming in Internet Environment (HTML, CSS, JavaScript, and PHP), and Unified Modeling Language.

2014-2017

Bachelor's degree, Computer Science and Multimedia, Higher Institute of Multimedia Arts, Manouba, Tunisia.

o Relevant Coursework: Algebra, Analysis, Physics, Object-Oriented Programming (Java), Relational Database, and Graphic Design.

2014 Secondary School degree, Mathematics, Secondary School Med Boudhina, Hammamet, Tunisia. o Relevant Coursework: Algebra, Analysis, Physics, and Chemistry.

### Certifications

Since HarvardX's Data Science Professional Certificate using R, Harvard University.

- September o Fundamental R programming skills.

  - 2020 Statistical concepts such as probability, inference, and modeling and how to apply them in practice.
    - o Gain experience with the tidyverse, including data visualization with ggplot2 and data wrangling with
    - o Become familiar with essential tools for practicing data scientists such as Unix/Linux, git and GitHub, and RStudio.
    - o Implement machine learning algorithms.
    - o In-depth knowledge of fundamental data science concepts through motivating real-world case studies.

October Certificate in Software Development For Medical Navigation Systems, Technische 2019-January Hochschule, Ulm. Germany.

o Software development: Programming with MITK (C++), Version control (Git), Testing and bug tracking.

o Application concepts navigation: Tracking devices and navigation hardware OpenIGTLink (3D Slicer).

2020

October-: Certificate in Deep Learning with TensorFlow, IBM.

November o Linear and Logistic Regressions, Convolutional Neural Network (CNN), Recurrent Neural Network (RNN), Long Short-Term Memory (LSTM), Restricted Boltzmann Machines (RBMs), Autoencoders, and Deployment.

January 2019 Certificate in Introduction to Artificial Intelligence, Microsoft.

- o Machine Learning: Creating a Regression, Classification, and Clustering Models using Azure Machine Learning Studio.
- o Natural Language Processing: Text Analytics, Translation, and Speech.
- o Computer Vision: Image Classification, Image Analysis, Face detection, and Recognition.

### Experience

### Internships

Since August Data Science Intern (Master Thesis), KAMAG Transporttechnik, Ulm, Germany.

2020 Optimization of yard movements and automatic generation of transport orders. The case study is applied to a yard of DB Schenker company located in Nürnberg, Germany, which uses KAMAG Wiesels.

- Understand and define the problem.
- o Find the most appropriate approach for the purpose of the project based on related works and research.
- o Preprocess Yard Management System and vehicle sensors data.
- o Define and evaluate a Data-Driven model to predict future transport orders.
- o Analyze data and domain constraints to achieve optimal movement prediction.
- o Define and evaluate the model based on the data and constraints.
- o Deploy the model in the Yard Management System.
- o Follow Domain-Driven In-Depth Pattern Discovery as a Domain-Driven Data Mining methodology.
- Write a technical report.
- o Used technologies: Predictive Analytics, Constraint Programming (Minizinc), Domain-Driven Data Mining, Python, Pandas, Matplotlib, Seaborn, Numpy, Tensorflow, GitHub, and LaTeX.

February-July Software Engineer Intern, CP Georges Renault, Nantes, France.

2019 Setting up a server and developing a responsive web interface for a tightening controller to make the configuration of the system using a web browser.

- Design a web architecture that meets the company constraints.
- o Compare the web technologies and select the most efficient solution adapted to the constraints.
- o Develop the back-end and the front-end of the prototype, then integrates them into the tightening controller.
- Write a technical report.
- Used technologies: API REST, Cutelyst, Vue.js, JSON, NGINX, Responsive Web Design (Adobe XD), Scrum, and SVN.

June-August Web Development Intern, Leads Generation, Concarneau, France.

- 2018 Development of a website that references existing Business-to-Business events such as webinars and conferences.
  - o Define the main functionalities and create a sitemap.
  - Install CMS plugins and implement a responsive website.
  - Upload the website to a server.
  - o Used technologies: Drupal 7, HTML 5, CSS 3, PHP, Twig, JavaScript, JQuery, OVH, and Mailchimp.

June-August Web Development Intern, BR&T, Tunis, Tunisia.

- Development of a website presenting the start-up CCA Tunisia.
  - o Install CMS plugins and implement a responsive website.
  - Keep the website up-to-day.
  - o Used technologies: WordPress, HTML 5, CSS 3, PHP, and Mailjet.

January–May Web Development Intern, Arzen Systems, Ankara, Turkey.

2017 Development of a learning management platform to manage courses, submit assignments and check grades.

- o Define the functionalities to implement using UML diagrams.
- Develop a dynamic platform and write a technical report.
- o Used technologies: UML, PHP, MySQL, JavaScript, HTML 5, CSS 3, Bootstrap, and AJAX.

Ulm, Germany

### **Academic Projects**

Since March Computer Vision Engineer, Technische Hochschule, Ulm, Germany.

The ability of a mobile robot to detect pictograms, warning signs, and traffic signs in video streams in indoor environments such as a shop floor.

- Write a seminar report to define the used techniques.
- o Evaluate transfer learning for object detection with Google Coral.
- o Used technologies: Deep Convolutional Neural Networks, Single Shot Detection, Transfer Learning, Google Coral TPU USB Accelerator, Raspberry PI 4, and LaTeX.

Since October Machine Learning Engineer, Technische Hochschule, Ulm, Germany.

- Make a prediction of a match between two teams based on the results of the last ten games.
  - o Data Understanding and Features Selection.
  - o Use Supervised Machine Learning algorithms: Classification (Decision Trees and Neural Networks).
  - o Write a technical report following the CRISP-DM model.
  - o Used technologies: Python, TensorFlow, Keras, Scikit-learn, Pandas, Scrum, Git, and LaTeX.

October- Sensor data acquisition developer, National School of Engineering, Brest, France.

Switch between light and distance sensors using a Human-Machine Interface and display the data.

2018 • Used technologies: Microcontroller (Cortex m3), C++ (QT), OpenGL, C, and CAN Bus.

### Skills

- o Machine Learning TensorFlow, Keras, Scikit-learn, Pandas, Seaborn, and AzureML
- **Programming Languages** Python, R, C++, C#, Java, and C
- Web REST API, Node.js, Express.js, Vue.js, Cutelyst (C++), JavaScript, HTML 5, CSS 3, PHP, and Ajax
- Database MySQL and NoSQL
- Version Control GitHub and SVN
- Agile Project Management Methodology Scrum
- o Information Security Secure Coding and Cryptography
- o Unified Modeling Language UML (Modelio) and Petri net (Petri Net Editor)
- o Software Tools Qt Creator, Visual Studio, Eclipse, Matlab, and Scilab
- Mobile Application Development Android Studio
- o Graphics Editors Adobe XD, Illustrator, and Photoshop
- o Virtual Reality and Augmented Reality Development Unity3D, Oculus, and Vuforia

### Languages

Arabic Native

French C1

English B2+ (TOEIC: 870/990)

German A2 Turkish A1

### Interests

Sport Long-time handball player in various clubs, currently licensed player in the SG Ulm/Wiblingen in

Travel Adventure trips around the world to get to know other cultures.

Ulm, November 8, 2020

Khaled Jallouli

Jacobs .