



DATADOIT

# PFE BOOK

2022/2023

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DATADOIT

# WHO WE ARE ?



DataDoit was founded in 2020 with core expertise in building AI pipelines for resource-constrained devices. With a fine mix of Deep Learning/Machine Learning/AIoT expertise and deep understanding of modern business challenges, we support our partner companies in developing highly customized and ground-breaking AI-powered solutions. We provide our customers with a wide range of collaboration models that suit their needs.

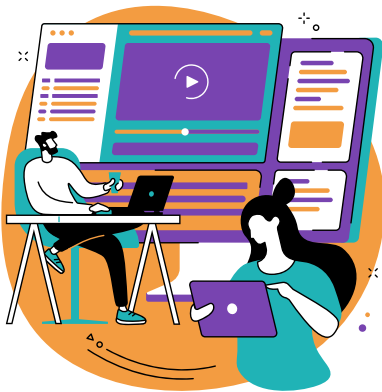


DATADOIT

# OUR SERVICES



**CONSULTING**



**SOLUTION PROVIDER**



**TRAINING**



DATADOIT

# HOW TO APPLY ?

You are a graduating student? You are looking for a Final Year Project that takes you to the next level ?

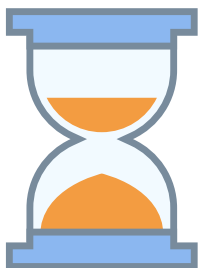
DataDolt is the right place for You ! **Apply Now !**



Select the project that suits your qualifications and meets your expectations



Send your CV to : [hello@data-doit.com](mailto:hello@data-doit.com)  
(indicate the selected project in the email subject)



Stay tuned ! We will contact you for an in-person or remote interview !



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# Deploy an Occupancy Analytics Solution at the Edge

## Objectives

- Investigate different pre-trained models for person detection
- Detect the number of people in the video
- Perform specific analytics on the detected objects

## Output

- Benchmarking of investigated models
- Optimization and edge deployment of the selected model
- Development of analytics dashboard

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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# Development of a Smart Attendance System

## Objectives

- Investigate deep learning models for face recognition
- Train a face recognition model
- Implement the final smart classroom application

## Output

- Trained face recognition model
- Optimized lightweight database schema
- Smart classroom application with statistical dashboard

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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# AI Solution for early fire detection

## Objectives

- Detect fire and other dangers in critical environments in a very early stage
- Local processing of fire detection models
- Instant coverage of large area

## Output

- Benchmark of trained model
- Optimization and edge deployment of the computer vision pipeline
- Efficient communication solution for instant alerting

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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# Design of a Smart Queuing System

## Objectives

- Gather data from a live video stream
- Detect people and generate a variety of movement statistics
- Build an application for the monitoring of queuing systems

## Output

- Object detection and recognition
- Optimization and edge deployment of a variety of CV models
- Development of analytics dashboard

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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## Advanced home security using object detection

### Objectives

- Detect people and other objects in unauthorized zones,
- Efficient deployment of optimized models,
- Reduce false positive alerts

### Output

- Local smart 'NVR'
- Real-time video analysis of security cameras
- Active detection and dynamic camera viewing

### Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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# Embedded Machine Learning Solutions for ATM Security

## Objectives

- Predict the state of the current scene
- Detect human pose
- Alert against possible fraud scene
- Reduce false positive alerts

## Output

- Optimize and deploy human pose detection model
- Real-time video analysis of ATM security camera
- SMS and email alerting system

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with CNN and computer vision applications
- Prior exposure to development of IoT applications



**6 months**



**1 intern**



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# Develop an Enterprise-Grade Edge AI server

## Objectives

- Design an appropriate architecture to host a powerful/real-time inference service
- Configure and deploy an edge AI server
- Perform specific analytics to evaluate the inference performance of the server

## Output

- Selection of the appropriate
- Optimization and edge deployment of the selected architecture,
- Development of a dashboard for the monitoring of server performance

## Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with edge AI, Docker, Kubernetes, Grafana, IoT compute devices



**6 months**



**1 intern**



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## Developing of a digital communication strategy : boosting the visibility of the startup DATADOIT nationally and internationally

### Objectives

- Increase the website traffic
- Optimize the natural referencing to increase visibility on search engines
- Improve the visibility on social media platforms

### Output

- Improve the website SEO
- Digital communication strategy

### Skills & competencies

- Critical thinking and problem solving skills
- Familiarity with Social media
- Familiarity with web development



**4 months**



**2 intern**



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