

# **Thomas Hatting**

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## Summary

Software & hardware engineer passionate about developing products and services to solve current needs and problems in the world, especially using latest developments in Cloud Computing, Artificial Intelligence, Robotics and Internet of Things. Past experience in various engineering roles in the ICT industry in the UK and Denmark.

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### **Skills**

Programming: Python, C++, JavaScript, Bash, Java Cloud Computing: AWS, Heroku, GCP, Kubernetes Web Development: Django, React, REST, HTML, CSS

Development Frameworks: Agile, Lean, DevOps

Operating Systems: Linux, Windows

Deep Learning: Keras, TensorFlow, Convolutional Neural Networks Machine Learning: NumPy, Scikit-learn, Classification, Clustering

Robotics: ROS, Gazebo, RViz, SLAM Mathematics: Statistics, Linear Algebra

Version Control & Automation: Git, GitHub, Ansible

**Projects** 

## Deep RL Arm Manipulation (Robotics Nanodegree)

Apr 2018 - May 2018

- In a simulated environment (C++ API and Gazebo), trained a robotic arm with gripper to touch an object
- C++ API provided an interface to Python code (using PyTorch library) to train Deep Q Learning (DQN) agent
- Robot arm touched object with 90% accuracy and the arm's gripper base touched object with 84% accuracy

#### Map My World Robot (Robotics Nanodegree)

Feb 2018 - Mar 2018

- Created a ROS package to launch my robot design and have it map the surrounding areas
- Mapping done by means of SLAM algorithms using an open-source approach called RTAB-Map
- 2D / 3D maps of the environment were clearly recognizable and more than 3 loop closures were achieved

#### 3D Perception (Robotics Nanodegree)

Jul 2017 - Aug 2017

- In a simulated environment (ROS/Ubuntu), created a perception pipeline for a PR2 robot to move an object
- Implemented image analysis using point cloud filtering and segmentation with programming done in Python
- Perception pipeline correctly identified objects: 100% in test world 1, 80% in test world 2, 88% in test world 3

## **Professional Experience**

#### Owner, Things2Connect

Copenhagen, Nov 2016 - Sep 2017

- Started company during a 3-month entrepreneurship program in Copenhagen (Akademikernes Startup)
- Idea generation and proof of concept of services based on robotics, machine learning and IoT
- Performed customer discovery and validation to develop a repeatable & scalable business model (lean canvas)

#### Marketing Research, Kantar Gallup

Copenhagen, Aug 2016 - Oct 2016

• Conducted marketing surveys and campaigns and achieved a target of 3-5 leads a day

#### Owner, ESR Technologies

Copenhagen, Aug 2015 - Nov 2015

- Developed business cases & models using latest developments in mobile communications (Internet of Things)
- Focused on the healthcare sector in Copenhagen

#### System Consultant, Regions Hovedstaden

Copenhagen, May 2014 - Dec 2014

- Designed, planned and coordinated data surveys amongst employees to determine work flows
- Determined the hospital's internal processes and converted these into system requirements
- Adapted the management tool to the requirements of the hospital

## **Network Assurance Engineer, Ericsson Ltd**

**Newbury, UK, Sep 2011 - Aug 2012** 

- Identified, analyzed and corrected incidents in Vodafone's 2G/3G/4G mobile network
- Followed through on tasks, pitched in to help others and adapted to changing situations
- Achieved a significant reduction in the number of network incidents and identified a list of underlying problems

#### Core Network Integration Engineer, Aricent Group

Newbury, UK, Oct 2010 - May 2011

- Responsible for implementation and integration of Ericsson switching servers in live mobile network
- Produced high-quality software release packages, procedures and work instructions ready for live deployment
- Developed a document repository with relevant knowledge, information and data to be passed onto future projects

## Databuild Engineer, Ericsson Ltd

**Newbury, UK, Feb 2007 - Apr 2009** 

- Participated in frequent workshops to determine requirements for key customers (Vodafone, EE, O2 Telefónica)
- Built, tested and deployed software & configuration data into customer networks, based on agreed requirements
- Instigated corrective action when customer expectations were not met and maintained a constructive dialogue

#### **Product and Operations Manager, Ericsson Ltd**

Guildford, UK, Apr 2007 - Apr 2009

• Managed the day-to-day operation of the business unit ensuring that the right processes were in place

#### **Technical Manager, Wyless Plc**

Uxbridge, UK, Jan 2006 - Mar 2006

Responsible for developing and maintaining the company's systems, strategy and IT policies

## Test Configuration Management Engineer, Ericsson Ltd

Copenhagen, May 2001 - Sep 2004

- Played an active role in the development of a prototype 3G mobile network for Vodafone in a test environment
- Clarified the objectives and established the requirements; tested, refined and optimized the software solutions
- Development of prototype system was a contributing factor to Vodafone awarding a major contract to Ericsson UK

#### Customer Support Engineer & Team Leader, Ericsson Ltd

Copenhagen, Aug 1996 - Apr 2001

- Based in Copenhagen but undertook short-term assignments on-site at customer premises throughout Europe:
   Germany, Italy, Norway, Portugal and the United Kingdom
- Supervised a team of 4-5 staff on later assignments

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## **Education**

Udacity, Robotics Software Engineer Nanodegree ProgramDurham University, Master of Business Administration (MBA)Danmarks Tekniske Universitet (DTU), MSc Electrical Engineering

Distance-learning program, completed 2018

Durham, United Kingdom, Class of 2006

Lyngby, Denmark, Class of 1996

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#### **Certification & Courses**

AWS Certified Cloud Practitioner (AWS, 2019), Python for Data Science and Machine Learning Bootcamp (Udemy, 2017), Object-oriented Programming: Java (IT-Universitetet, 2016), Business Cases (IT-Universitetet, 2016), IT Project & Program Management (IT-Universitetet, 2015), MCTS: Managing Projects with Microsoft Project (Microsoft, 2013), ITIL V3 Service Design (APMG, 2012), ITIL V3 Foundation (BCS, 2012), OCA - Oracle Certified Associate 10g (Oracle, 2010), Prince2 Practitioner (APMG, 2009)

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