Curriculum Vitae

Mark Philip Philipsen

Address

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Goal

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Autonomous self-replicating robots exploring the solar system. But first I want to work on increasing the level of automation in the food industry.

Skills

Expertise:	Computer Vision, 3D Vision, Project proposals, Data collection, Evaluation
Soft Skills:	Team work, Project planning, Supervision
Preferred Tools:	Python, C++, PyTorch, OpenCV, PCL, ROS, Docker, Unity, git

Work Experience

2021 – now	 CEO and only employee, Principal Perception ApS Part-time ML consulting and development services Data collection Machine learning DevOps
2020 – now	 Postdoctoral Researcher, Aalborg University (AAU) Computer Vision and Machine Learning research and applications Graph Neural Networks for mapping Machine vision for quality control Supervising student projects and teaching tasks Research and grant writing
2015 - 2016	 Research Assistant, AAU Computer Vision and Machine Learning research and applications Activity monitoring of mountain bike trails using thermal camera Machine vision for quality control in slaughterhouses Supervising student projects and teaching assistant tasks
2012 – 2015	 Student Software Developer, Intel Mobile Communications Analyzing and solving software problems Propagating solutions between products Debugging, test and verification

Education

July 2014

2017 - 2019	Industrial Ph.D in Applications of Vision and Robotics in Meat Produc- tion, Aalborg University (AAU) & Danish Teknological Institute Bringing state-of-the-art machine learning to bear on automation problems in a slaughterhouse setting.
	 Tool pose prediction from 3D point clouds Virtual Reality for remote control and data labeling Reinforcement Learning for process optimization
2013 - 2015	M.Sc. in Vision, Graphics & Interactive Systems (VGIS), AAU Semester projects and courses covering; computer vision, computer graphics and interactive systems.
	 Computer Vision for Vehicles Visiting Graduate Student at the Laboratory for Intelligent and Safe Automobiles (LISA), University of California, San Diego. Traffic light detection for driver assistance systems Detection and tracking of vehicles for event detection Crowd Counting at a Carnival Segmentation and tracking of carnival participants Augmented Reality for exploring virtual 3D models of buildings Interactive iPad application
	Cutaway effects shader programming
2010 - 2013	B.Sc. in Internet Technologies & Computer Engineering (ITC), AAU Semester projects and courses covering; distributed systems and understanding network technologies and computer architectures.
	 Person identification Fusion of facial and iris features for identification Event and location based photo sharing App and back-end development Autonomous/Remote controlled boat Network programming and real-time operation system
	Advanced bike lightMicro-controller programming and communication between watch and bike
Academics	

Telecom Seeds for the Future, Huawei, China
Selected as one of five students from Aalborg University to visit Huawei and China.
Chinese Language & Culture Study program

• Huawei LTE technology training

July 2013 Implementing Europe's Future Broadband Infrastructure, University of Technology and Life Sciences, Poland

Erasmus summer course with topics such as:

- Physical network planning
- Network architectures and technologies
- Applications and services
- Business and technology alignment, enterprise engineering

Publications

Available at Google Scholar and vbn.aau.dk Peer reviewed scientific papers: 18+

Interests

<u>Professional:</u>	Computer Vision, Machine Learning, Robotics,
	Communication Technologies
<u>General:</u>	Science, History, Politics, Travel, Investment, Ski-
	ing, Dog, Motorcycling