

# Joram Puumala

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## EDUCATION

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### Master of Science in Computer Science, Data Science

August 2019 – Present

*Tampere University*

*Tampere, Finland*

### Bachelor's Degree in Information Technology

January 2015 – December 2017

*Haaga-Helia University of Applied Sciences*

*Helsinki, Finland*

*Bloomsburg University of Pennsylvania (exchange studies)*

## EXPERIENCE

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### Teaching Assistant

August 2020 – Present

*Tampere University*

*Tampere, Finland*

*Introduction to Pattern Recognition and Machine Learning ([DATA.ML.100](#))*

*Pattern Recognition and Machine Learning ([DATA.ML.200](#))*

*Computer Vision ([DATA.ML.300](#))*

- Helping students during weekly exercise sessions
- Grading weekly exercises
- Devising new exercises for the course

### Machine Learning and Software Engineer

June 2017 – Present

*NDC Networks / Cinia*

*Espoo, Finland*

- Developed software and automation tools with Python
- End-to-end projects in Computer Vision/Object Detection domain
- Server administration and configuration management, mainly Linux distributions
- Bash scripting for server automation and router utilities
- IoT projects

## SELECTED PROJECTS

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### ADR Detection and Tracking | *Python, OpenCV, Darknet*

November 2021 – Present

- Detect and track dangerous goods on road (ADR) in real-time
- The main objective of the project is to increase safety in tunnels by tracking dangerous goods and triggering an alarm in case of an accident

### CoSSH | *Python, Multiprocessing, Paramiko*

June 2018 – October 2018

- Open-source mass configuration tool for Advantech's industrial routers
- The goal of the project was to speed up router configuration process and ease configuration management. Usage of the tool at NDC Networks has led to a significant reduction in router delivery lead time.

## KEY ABILITIES

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**Machine Learning** - In the past few years I've spent tremendous time revising math, understanding ML algorithms and implementing them from scratch. I deeply enjoy using the gained knowledge to tackle practical computer vision and deep learning problems.

**Data Engineering** - In my thesis and most recent work projects, I have engineered image datasets from scratch; data collection, cleaning, augmentation et cetera. This has honed my ability to understand the data and its role better, which has resulted in more robust machine learning models.

**Programming** - The last five years I've written code in my job and for fun. During that time, my ability to express ideas in code and solve real world problems has taken giant leaps forward. I mainly code in Python, but have limited experience with C++, JavaScript and Haskell as well. Some frameworks/libraries I've had a lot of exposure to are: Darknet, TensorFlow, OpenCV, NumPy, Flask, Pytorch.

**Focus** - Ability to deeply focus is something I've noticed ever since I started programming. When I immerse myself in a problem, I tend to live in that world, and ignore exterior distracting factors.