

# Michal Torma

SOFTWARE ENGINEER

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## Education

### University of South-Eastern Norway

MASTER IN ENVIRONMENTAL SCIENCE

Bø i Telemark

June 2019

- Master thesis - The reliability of Citizen-science data collection - analysis of *Natur i Endring* project

### University of Zilina

BACHELOR IN NATURE PROTECTION AND LANDSCAPE MANAGEMENT

Zilina, Slovakia

June 2014

- Telemark university collage, Bø i Telemark, Norway — Semester abroad - spring 2012

## Skills

**Languages** Python, Dart, Kotlin, Swift, Java, SQL, C, PHP, LaTeX

**Frameworks** Flutter, Django, Flask, Keras, WordPress

## Experience

### University of Oslo

HEAD ENGINEER

Oslo, Norway

April. 2018 - PRESENT

- Development of tools for *Natur i Norge* mapping system. Multiplatform app development and database management

### University of Oslo

EXECUTIVE OFFICER

Oslo, Norway

Jan. 2018 - Dec. 2019

- Developing and maintaining of citizen science project called *Natur i Endring* which consists of native mobile app for both iOS (written in Swift 4) and Android (written in Kotlin). Part of the job is developing and maintaining Linux VPS for the backend using Flask (later Django). I also work on migration of mobile apps to Flutter framework to streamline development. [www.naturiendring.no](http://www.naturiendring.no)

### Self-employed

WEB DEVELOPER

Martin, Slovakia

Jan. 2015 - Apr. 2019

- Developed multitude of webpages based on WordPress framework for small local businesses. Here are some examples.  
[sjoormen.no](http://sjoormen.no) - Webpage for promotion of Garvikstrondi camping (Seljord, Norway)  
[classervice.sk](http://classervice.sk) - Webpage for local taxi service (Martin, Slovakia)

### Hewlett-Packard

LINUX ADMINISTRATION LECTURER

Prague, Czech Republic

Jul. 2009 - Aug. 2010

- Lectured courses about Linux administration for enterprise customers.

### Apple retailer

IT TECHNICIAN

Martin, Slovakia

Apr. 2007 - Aug. 2008

- Worked as an IT technician for small Apple retailer.

## Projects

### NiN mapping

Jul. 2020

- Took part in *Natur i Norge* mapping study in Karasjok (Norway) as a part of GEco group under NHM - UIO.
- The project was based around the mapping of a study area by multiple mappers, and subsequent study of mapping inconsistencies.

## Won Forskerforbundets Hjernekraft pris 2019

Nov. 2019

- Won Forskerforbundets Hjernekraft (The Researchers' Association's Brain Power) price for *Natur i Endring* project. More info [here](#)

## NIBIO presentation of *Natur i Endring* infrastructure

Apr. 2019

- Presentation of the underlying infrastructure for *Natur i Endring* project

## GIS data scrubbing and analysis

Jan. 2018 - PRESENT

- Django based solution for GIS data gathering from legacy sources
- Personal project that gathers forestry data in Slovakia from old public servers where the only public option to access the data is through Silverlight web app. This solution gathers the available data while keeping track of sparse changes in time. Metadata for individual polygons are gathered from .NET server, decoded from binary XML files and stored in organized PostGis database.

## Android app for camping

Jul. 2017 - Aug. 2017

- App designed to support exploration of natural surroundings for tourists in Garvikstrondi camping (Seljord, Norway). [Google Play store](#)
- Offline-capable map including tracks of hikes in the area with detailed descriptions

## Accelerometric data analysis

Aug. 2015 - Jul. 2017

- Unsupervised machine learning project for analysis of accelerometric data from brown bear (*Ursus arctos*) to identify distinct animal behaviors. Project used Keras library for deep neural networks

# Publications

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## Conference paper

Nov. 2019

- Bryn, A., Habberstad, M-Ø., Hjelle, A.M.A., Horvath, P., Langen, M.H., Lund, O., Torma, M. & Volden, I.K. (2019): Folkeforskning om klima og skoggrenser: [www.naturiendring.no](http://www.naturiendring.no). In Lerkelund, H.E. (ed.) *Forskning i Friluft 2018*, page 277-283.

## Exhibition

Jul. 2020

- Bryn, A., Dalen, T.G., Finne, E.A., Heiberg, H., Keetz, L.T., Nilsen, I.B., Parmentier, F-J., Snekenes, C., Stordal, F., Aas, K.S., Alhuizen, I., Berntsen, T.K., Bjerke, J.W., Bright, R.M., Dyrddal, A.V., Geange, S., Opel, T., Pirk, N., Puschmann, O., Tang, H., Torma, M., Vollsnes, A.V., Westermann, S. & Yilmaz, Y. (2020): *Natur i endring*. Museumsutstilling lagd for forskningsprosjektene EMERALD (NFR) og *Natur i endring* (Sparebankstiftelsen DNB). Stilles ut i Klimahuset ved Naturhistorisk museum (UiO) og Norsk Fjellsenter (Lom). Åpnet 26. Mars 2020. Naturhistorisk museum (UiO) og Bolt & Klock Utstillingsdesign, Oslo.

# Presentations

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## EMERALD presentation

Oct. 2020

- Presentation of preliminary results from Karasjok NiN mapping project for EMERALD group at NHM

## *Natur i Endring* presentation

Jul. 2020

- Bryn, A., Dalen, T.G., Finne, E.A., Heiberg, H., Keetz, L.T., Nilsen, I.B., Parmentier, F-J., Snekenes, C., Stordal, F., Aas, K.S., Alhuizen, I., Berntsen, T.K., Bjerke, J.W., Bright, R.M., Dyrddal, A.V., Geange, S., Opel, T., Pirk, N., Puschmann, O., Tang, H., Torma, M., Vollsnes, A.V., Westermann, S. & Yilmaz, Y. (2020): *Natur i endring*. Museumsutstilling lagd for forskningsprosjektene EMERALD (NFR) og *Natur i endring* (Sparebankstiftelsen DNB). Stilles ut i Klimahuset ved Naturhistorisk museum (UiO) og Norsk Fjellsenter (Lom). Åpnet 26. Mars 2020. Naturhistorisk museum (UiO) og Bolt & Klock Utstillingsdesign, Oslo.