# Yaolin Ge

Alfred Getz' vei 1, 7034 Trondheim | +47 92526858 | https://geyaolin.com | yaolin.ge@ntnu.no

## Summary


- Ph.D. candidate in the statistics group at Dept. of mathematical sciences at NTNU.
- Experience with complex machine learning system development and data analytics.


## Education

**Norwegian University of Science and Technology** **Trondheim, Norway**
*Ph.D. candidate in the statistics group, Dept. Mathematical Sciences* Aug. 2020 – present (expected Aug. 2023)
Thesis project: Developing multi-scale machine learning software systems for data analytics purposes to boost the autonomy in robotic oceanographic sampling.

**KTH Royal Institute of Technology** **Stockholm, Sweden**
*MSc, Maritime Engineering,* G.P.A. 4.625/5.00 Aug. 2019 – Jul. 2020
Thesis project: Developed an embedded software system to estimate and predict the location of robots.

**Norwegian University of Science and Technology** **Trondheim, Norway**
*MSc, Marine Technology,* G.P.A. 3.93/4.00 Aug. 2018 – Jun. 2019
Relevant project: Developed numerical prediction system for the lifting forces of a propeller.

**University of Strathclyde** **Glasgow, United Kingdom**
*International Student Exchange Program,* G.P.A. 3.85/4.00 Sept. 2017 – Jan. 2018
Relevant project: Analyzed structural static and dynamic behavior using the finite element method.

**Jiangsu University of Science and Technology** **Zhenjiang, China**
*BSc, Naval Architecture and Ocean Engineering,* G.P.A. 3.89/4.00**,** Rank: 2/230 Sept. 2014 – Jun. 2018
Thesis project: Analyzed the results of a numerical solver to study the effect of Vortex-Induced-Vibration on slender body structures such as a steel catenary riser (SCR) in the deep sea.
Awards: National Scholarship (top 1%), First prize in Academic Competition in Mechanics knowledge,

## Experience

**Norwegian University of Science and Technology** **Trondheim, Norway**
*Ph.D. candidate, Dept. Mathematical Sciences* Aug. 2020 – present
- Designed and implemented multi-scale machine learning software systems for variable data analytics objectives.
- Deployed and integrated the systems onboard an unmanned robot for several successful field experiments.
- Collaborate and communicate closely with multiple customers including SINTEF Ocean, AURLab NTNU, LSTS, MARETEC for knowledge dissemination to foster novel ideas.
- Analyze big dataset using Python and other cloud infrastructures such as Google Colab and AWS.
- Document and publish the results to relevant stakeholders and clients and share knowledge with the public. Two papers accepted.

**Peking University** **Beijing, China**
*Summer research student at AI+Art Lab, PKU* Jul. 2019 – Aug. 2019
- Studied machine learning and deep learning principles, particularly computer vision techniques.
- Applied and integrated motion capturing algorithms *OpenPose* onboard a humanoid robot. [video]
- Demonstrated the performance of the algorithms with a robot dance show. [video]

## Skills & Interests

**Programming:** Python, Git, C/C++, Bash scripting, Matlab, SQL, R, Julia
**Frameworks:** Numpy, Pandas, Scipy, Matplotlib, Plotly, CUDA
**Software**: PyCharm, QGIS, Microsoft Office365, Anaconda, VS Code, Adobe Photoshop/Illustrator
**Language:** English (full professional), Norwegian (conversational), Mandarin (native)
**Interests:** Outdoor life (camping, summitting, cross-country skiing ...), Taekwondo, Dance, Music, Travelling

## Awards & Competitions

| | |
|---|---|
| 2021 | Taekwondo WT – NM 2021, 3rd in KAMP, 4th in Poomsae, Norway |
| 2019 | Best Popular Prize, AI + Art in Robot Dancing Competition, PKU, China |
| 2017 | Merit Student, MOE, China |
| 2017 | First Prize, Academic Competition in Mechanics Knowledge, JUST, China |
| 2016 – 2017 | National Scholarship, MOE, China |
| 2016 | Second Prize Scholarship, CSSC Huangpu Wenchong, China |
| 2015 – 2016 | First Prize, Renmin Scholarship, MOE, China |
| 2015 | National Encouragement Scholarship, MOE, China |

## Publication

[1] Yaolin Ge, André Julius Hovd Olaisen, Jo Eidsvik, R. Praveen Jain, and Tor Arne Johansen. Long-horizon informative path planning with obstacles and time constraints. IFAC-PapersOnLine, 55(31):124–129, 2022. 14th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles CAMS 2022.

[2] Yaolin Ge, Jo Eidsvik, Tore Mo-Bjørkelund. 3D Adaptive AUV Sampling for the Classification of Water Masses. IEEE Journal of Oceanic Engineering, 2023. [accepted and underproduction]

## Extra-curricular

**Taekwondo instructor Trondheim, Norway**
*NTNUI Taekwondo* Jan. 2020 – present

- I am a Taekwondo instructor who plans and adapts training for all members.
- Competed in the Norwegian Championships in 2021, won 1 bronze medal in combat senior M 74+.

**Salsa line instructor Trondheim, Norway**
*NTNUI Dans* Sept. 2021 – present

- I am involved in the organization of the weekly dance classes.

## Certificates

**Deep Learning Specialization** acquired: 15th-April-2020, Coursera
*This is offered by deeplearning.ai, covers basic and advanced topics in deep learning with practical programming tasks, which enable me to build deep learning models and solve real-world problems.*

**Fundamentals of Accelerated Computing with CUDA Python** acquired: 20th-April-2022, NVIDIA
*I have learned about how to speed up the calculation using GPU programsg using CUDA.*

## Reference


| | | |
|---|---|---|
| Jo Eidsvik | Dept. of Mathematical Sciences, NTNU | |
| Professor | jo.eidsvik@ntnu.no | +47 7359 0153 |
| Geir-Arne Fuglstad | Department of Mathematical Sciences, NTNU | |
| Associate Professor | geir-arne.fuglstad@ntnu.no | +47 7359 1699 |