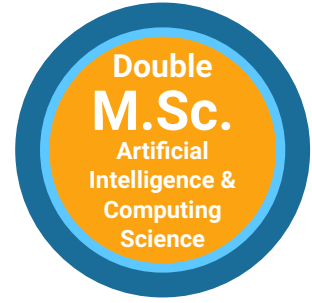


ARIANNE MEIJER

QUANTUM COMPUTING RESEARCHER

Currently, I am a researcher at University of Turku researching quantum software in preparation of starting a PhD in 2021. I have two master's degrees: one in Artificial Intelligence (with cum laude distinction), and one in Computer Science. I have obtained practical experience at many different companies and published two papers [4, 3].



obtained at
Radboud University Nijmegen

PERSONALIA



Arianne Meijer



Espoo, Finland



Dutch



ariannemeijer@gmail.com



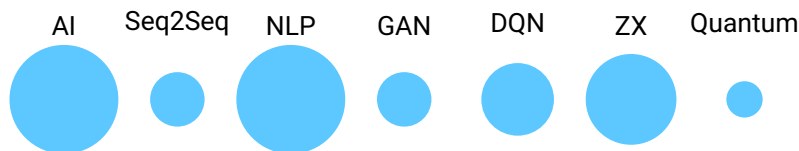
github.com/aerylia



linkedin.com/in/aerylia

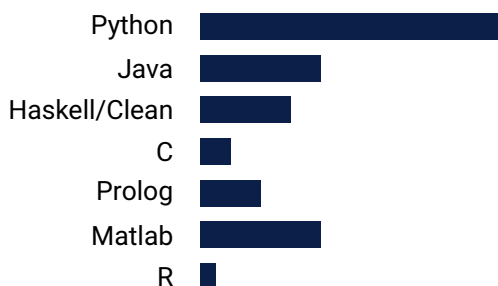
SKILLS AND TECHNOLOGIES

Relative expertise:



LANGUAGES

Relative expertise, in order of preference:



English (professional)



Dutch (native)



German (intermediate)



Finnish (Beginner)

ACTIVITIES

I love to challenge myself both creatively and intellectually. I particularly enjoy combining established techniques in new ways. This can easily be seen in my crafts.

Or in the words of Spoonboy from the Matrix (1999):
Do not try and think outside the box, that's impossible.
Instead, only try to realize the truth... There is no box.



Baking
Puzzling
Warhammer AoS
Beat Saber
Knitting

EXPERIENCE

- 01/2021 - 12/2024** : **Doctoral candidate, University of Helsinki, Helsinki (Finland)**
Researching NISQ software.
- 08/2020 - 12/2020** : **Project researcher, University of Turku, Turku (Finland)**
Researching quantum computing algorithms in particular VQE.
- 10/2019 - 04/2020** : **Research scientist, Cambridge Quantum Computing, Cambridge (United Kingdom)**
Working on $t|ket\rangle$ i.e. researching quantum compiling techniques. [3]
- 04/2019 - 08/2019** : **AI Master thesis, Radboud University, Nijmegen (the Netherlands)**
Investigated the use of deep reinforcement learning for compiling quantum circuits. Supervisors: Aleks Kissinger (RU) and Johan Kwisthout (RU). Grade: 9/10. [2]
- 01/2019 - 03/2019** : **Teaching assistant quantum computing, Radboud University, Nijmegen (the Netherlands)**
Researched a compiling technique for quantum computers and wrote an paper about it. [4]
- 06/2018 - 11/2018** : **Graduation internship Computing Science, Machine2Learn, Amsterdam (the Netherlands)**
Researched natural language generation in the form of a chatbot and language style transfer. Supervisors: Tom Heskes (RU) Wouter Oosterheert (Machine2Learn). [1]
- 09/2017 - 02/2018** : **Internship Artificial Intelligence, Simon, Eindhoven (the Netherlands)**
Created an automatic invoice processor. Supervisors: George Kachargis (RU) Martha Larson (RU) Erik van Breusegem (SIMON). Grade: 8.5/10.
- 08/2016 - 02/2017** : **Junior data scientist, Anchormen, Amsterdam (the Netherlands)**
Worked on several Data Science and AI projects.
- 03/2016 - 08/2016** : **Graduation Internship Artificial Intelligence, RadboudUMC, Nijmegen (the Netherlands)**
Used kinship verification for syndrome diagnosis. Supervisors: Marco Wiering (RuG) Jayne Hehir-Kwa (RadboudUMC) Hamdi Dibeklioglu (TU Delft).
- 05/2015 - 08/2015** : **Graduation Internship Computer Science, Atos, Groningen (the Netherlands)**
Used text mining for predictive maintenance on Atos' computer network. Supervisors: Michael Biehl (RuG) Marco Aiello (RuG) Mark Niemeijer (Atos).

EDUCATION

- 01/2021 - 12/2024** : **Computer Science PhD, University of Helsinki, Helsinki (Finland)**
Researching NISQ software.
- 09/2016 - 08/2019** : **Master Artificial Intelligence, Radboud University, Nijmegen (the Netherlands)**
Judicium: Cum Laude (i.e. graduated with distinction)
- 11/2015 - 06/2019** : **Master Computing Science, Radboud University, Nijmegen (the Netherlands)**
- 09/2013 - 01/2019** : **Bachelor Artificial Intelligence, University of Groningen, Groningen (the Netherlands)**
- 09/2011 - 10/2015** : **Bachelor Computer Science, University of Groningen, Groningen (the Netherlands)**

PUBLICATIONS

- [1] Arianne Meijer-van de Griend. *Constrained quantum CNOT circuit re-synthesis using deep reinforcement learning*. UNPUBLISHED, Master thesis Artificial Intelligence. 2019. ResearchGate: RG.2.2.11886.77125.
- [2] Arianne Meijer-van de Griend. *Natural language generation for commercial applications*. UNPUBLISHED, Master thesis Computing Science. 2018. ResearchGate: RG.2.2.21953.10087.
- [3] Arianne Meijer-van de Griend and Ross Duncan. "Architecture-aware synthesis of phase polynomials for NISQ devices". In: *arXiv preprint arXiv:2004.06052* (2020). Presented at QPL 2020, virtual.
- [4] Aleks Kissinger and Arianne Meijer-van de Griend. "CNOT circuit extraction for topologically-constrained quantum memories". In: *Quantum Information and Computation* 20.7&8 (2020), pp. 581–596.