



# TOGAN T. YUSUF

**Age:** 23 \* **Gender:** Male \* **Portfolio:** togan.me \* \* \* \*

I'm a senior Electrical & Electronics Engineering undergraduate passionate about Quantum Computing and its application in Machine Learning and Optimization.

## EDUCATION

<b>Bachelor's Degree   Electrical and Electronics Engineering (English)</b>	June 2016 – June 2022
Ankara University	Ankara, Turkey

## WORK EXPERIENCE

<b>STAR Research Scholar</b>	January 2022 – Current
TÜBİTAK - Scientific and Technological Research Council	Ankara, Turkey

- Research project on Deep Learning techniques for RF fingerprinting

<b>Research Intern</b>	June – September 2021
CERN openlab	Geneva, Switzerland/Remote

- Completed trainings and co-developed ML applications with python
- Research project on generative models for Higgs boson process simulation
- Final report on Quantum GANs for Higgs boson ttH process data generation

<b>Project Manager</b>	April 2017 – September 2020
Robotics and Science Society - Ankara University	Ankara, Turkey

- Team project of 8+ students
- Worked on the development and design of image processing models

<b>Electronics Technician</b>	June – September 2019
Elektrolojik Energy Technologies Ltd. Co.	Ankara, Turkey

- Worked on electronics devices and their safety testing applications

## COURSES

<b>Deep Learning</b>	September – November 2021
Coursera - DeepLearning.AI	

<b>Global Summer School on Quantum Machine Learning</b>	12 – 23 July 2021
Qiskit IBM	

<b>Machine Learning</b>	December 2020 – February 2021
Coursera - Stanford University	

<b>Foundations of Theoretical and Computational Science Summer School</b>	1 – 26 February 2021
CHPC and NITheP	

<b>Introduction to Quantum Computing</b>	October 2020 – May 2021
IBM - The Coding School	

<b>The Feynman Lectures on Physics Vol. I, II, and III</b>	Spring Terms 2017 - 2019
Ozgur Cildiroglu - Ankara University	

## TECHNICAL SKILLS

**Languages:** Python \* MATLAB \* GNU Octave \* C/C++ \* Mathematica \* Assembly

**Software:** TensorFlow \* PyTorch \* Qiskit \* PennyLane \* Q#/QDK \* AutoCAD

**Hardware:** Raspberry Pi \* Arduino \* RTL-SDR

## RESEARCH AND PUBLICATIONS

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<b>Modified Layerwise Learning for Data Re-uploading Classifier in HEP Classification</b> IEEE - DOI: 10.1109/QCE52317.2021.00024	November 2021
<b>Quantum GANs for Higgs boson ttH process Data Generation</b> CERN openlab - DOI: 10.5281/zenodo.5577410	October 2021
<b>An Efficient Optimization Method: Natural Gradient Descent</b> Ankara University Department of EEE	January 2021
<b>Estimation of Motion Parameters for Falling Objects</b> Ankara University Department of EEE	November 2020

## CHALLENGES AND HACKATHONS

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<b>CERN Webfest: Self-supervised learning for wearable sensors data classification</b> Bulding Act.App - AI powered app for Healthcare	August 2021
<b>QHACK 2021: The Quantum Machine Learning Hackathon - Xanadu</b> Second place, winner of the grand CERN internship	February 2021
<b>The IBM Quantum Challenge</b> Foundational badge	November 2020
<b>KTHACK2020: Quantum Technologies Hackathon</b> The First place prize in Academic/Scientific studies category	October 2020

## TRAINING AND WORKSHOPS

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<b>Q# Trainer Training Program</b> Microsoft	January – February 2021
<b>Azure Quantum Developer Workshop 1 &amp; 2</b> Microsoft	23 January & 2 February 2021
<b>Global Quantum Programming Workshops</b> QWorld	16 – 28 November 2020
<b>Machine Learning and Transformer Structures in DeepNLP</b> Datacamp'20 – Boğaziçi University	04 – 11 November 2020
<b>MATLAB Onramp Training</b> MathWorks	24 January 2019

## TEACHING EXPERIENCE

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<b>Trainer - Q# Quantum computing workshop</b> Microsoft - QTurkey	20 – 23 May 2021 Remote
<b>Trainer - Q# Quantum computing workshop</b> Microsoft- QTurkey	15 – 18 March 2021 Remote
<b>Python Lessons</b> Ankara University - Robotics and science society	Fall Term 2018 – 2019 Ankara, Turkey
<b>Arduino/Raspberry Pi Lessons</b> Ankara University - Robotics and science society	Fall Term 2017 – 2018 Ankara, Turkey

## LANGUAGES SKILLS

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**English:** Reading C1 \* Listening C1 \* Speaking C1 \* Writing C1  
**German:** Reading B1 \* Listening B1 \* Speaking B1 \* Writing B1

## ACTIVE MEMBERSHIPS

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**APS \* IEEE Quantum**