


# UTKU BIRKAN

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## EDUCATION

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- 2018 – Present    **BSc Computer Engineering (Double Major)**  
Middle East Technical University – *Ankara, Turkey*  
Cumulative GPA: 3.77
- 2017 – Present    **BSc Physics**  
Middle East Technical University – *Ankara, Turkey*  
Cumulative GPA: 3.48

## RESEARCH EXPERIENCE

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- 2020 – Present    **Undergraduate Researcher** (08/2020 – Present)  
**Research Intern** (07/2020 – 08/2020)  
QWorld Association – *Lativa*  
P.I.: Abuzer Yakaryılmaz, PhD and Özlem Salehi, PhD
- Work on “Implementing Quantum Finite Automata Algorithms on Noisy Devices” project as a part of QWorld’s QResearch Program.
  - Study the mathematical modelling of quantum finite automata and their language recognition power for some specific languages.
  - Investigate architecture specific optimisations for the studied automata.
  - Conduct experiments using IBM’s quantum computers.
  - Oversee the preparation of project manuscript and poster presentation.

## PUBLICATION

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Utku Birkan et al. “Implementing Quantum Finite Automata Algorithms on Noisy Devices.” In: *Computational Science – ICCS 2021*. Springer International Publishing, 2021, pp. 3–16. doi: 10.1007/978-3-030-77980-1\_1. arXiv: 2105.06184 [quant-ph]

## PROFESSIONAL & VOLUNTEER EXPERIENCE

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- 2019 – Present    **Leading Member**  
QTurkey – *Turkey*
- A part of the *Train the Trainers* education program, developed in cooperation with Microsoft.
  - Develop Jupyter based education material as a part of the educational committee.
  - Volunteered as an instructor or a mentor in various “Introduction to Quantum Computing” workshops.
  - Helped organise a seminar on quantum computing.
- 2018 – Present    **Member**  
METU Life Saving and First Aid Society – *Turkey*
- Volunteer as an instructor, teaching first aid to the local community and university members.

## QUALIFICATIONS

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Languages	– Native Turkish	– Advanced English
Computer Skills	Programming Languages	
	– C/C++	– Python
	– Q# and QDK	– Swift
	– $\LaTeX$	– Haskell
	Technologies/Frameworks	
	– git and Github	– Qiskit

## HONOURS, CERTIFICATES & AWARDS

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- 2020    **First Team Award for the Best Project**, QWorld Association
- 2018 – Present    **First Aid License**, Turkish Red Crescent
- 2017 – Present    **High Honor List**, Middle East Technical University
- 2017 – Present    **Undergraduate Scholarship Program**, TÜBİTAK (The Scientific and Technological Research Council of Turkey)  
Awarded due to high ranking in National University Entrance Examination.