Omar Saracevic

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CURRICULUM VITAE

EDUCATION

TECHNISCHE UNIVERSITAET GRAZ, M.SC. BIOMEDICAL ENGINEERING, AUSTRIA, OCT 2019 – PRESENT

Major: Biomedical Instrumentation and Sensors, Minor: Brain-Computer Interfacing

TECHNISCHE UNIVERSITAET GRAZ, B.SC. BIOMEDICAL ENGINEERING, AUSTRIA, OCT 2016 – AUG 2019

Graduated with Distinction, Top 5% of Biomedical Engineering and Computer Science Students (Dean's List)
Leistungsstipendium 2016/2017, 2017/2018, 2018/2019 – Scholarship for Academic Excellence

THOMAS JEFFERSON HIGH SCHOOL FOR SCIENCE AND TECHNOLOGY, SEPT 2012 – JUNE 2016

Ranked the No. 1 High School in the United States (NewsWeek) with focus on science, technology, engineering and mathematics.

Cumulative Grade Point Average: 4.352 out of 4.0
American College Testing (ACT): 35 / 36 **SAT Subject Tests:** Math 2 (800 / 800), Biology (780 / 800)

EXPERIENCE

TECHNISCHE UNIVERSITÄT GRAZ, INSTITUTE OF INTERACTIVE SYSTEMS AND DATA SCIENCE
TEACHING ASSISTANT, JULY 2018 – PRESENT

- Prepared weekly tutorials for the supplemental practicals for VU Informatik 1 and VU Informatik 2.
- Taught 3rd and 4th semester students concepts ranging from introduction to programming in Python, object-oriented programming and machine learning.
- Worked with a variety of datasets including the MNIST dataset, air quality data (luftdaten.info), and ECG data (European ST-T database) to provide students with hands on applications of learned theoretical concepts.

INSTITUTE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY AT UNIVERSITY OF SARAJEVO
RESEARCH INTERN, JULY 2015 – AUGUST 2015

- Created agarose gels and conducted standard PCR techniques which were vital for ongoing projects.
- Extracted human DNA using Miller's method and various Multiplex systems from samples of gum, saliva, and peripheral blood.
- Conducted paternity and maternity testing between pairs of 500-year-old bones to determine if siblingship is present.
- Reviewed and edited professional science articles for the national symposium for advanced research.

ACHIEVEMENTS

2018 National Selected as one of the top 20 students across various fields of study in Graz as a member of the High Potential Program, the **Circle of Excellence (CoE)**. The selection is based on student's exceptional academic performance, international experience, and extracurricular engagement. Members of the CoE take part in a yearly social project as well as weekly seminars, coaching sessions and workshops with companies such as The Boston Consulting Group and McKinsey & Company, in addition to peer groups and team building events.

2017 International **L'Oreal Brandstorm Tech Challenge Austrian Winner and International Finalist** from more than 25,000 students from 60 countries worldwide for the development of an Internet of Things Mobile Application that utilizes machine learning algorithms and integrated sensors to create a cosmetics personal assistant named Lore.

2016 National **Thomas J. Watson Memorial Scholarship** Winner

2016 International **G7 Junior Summit**, Mie, Japan, selected by the Japan's Ministry of Foreign Affairs, the U.S. Department of State and the TOMODACHI Initiative as one of four U.S. Delegates out of 560 applicants to represent the United States. The J7 Summit was an opportunity to talk in-depth about issues such as fair trade, health, the fight against poverty and diseases, and women's rights. In youth sessions as well as in meetings with experts I debated the key issues of the G7 from my perspective, exchange various opinions, find common ground, and present joint positions publicly to government officials including Prime Minister Shinzo Abe, Governor of Mie Prefecture Eikei Suzuki and US Ambassador to Japan Caroline Kennedy.

2016 National One of seven Thomas Jefferson invitees by the **White House Office of Science and Technology Policy** to attend the Fourth Annual State of Science, Technology, Engineering, and Math Address given by Dr. John P. Holdren, Assistant to the President for Science & Technology.

2015 International **Goethe-Institut's Discover a New Path: Explore Germany** Competition Winner. I was selected as one of 12 students from than 150 based on previous research experience to take part in a STEM trip to Germany. On the trip I learned about evolutionary research and its practical uses at TU Berlin Department of Bionics & Evolution Technique, observed climate impact research at the Potsdam-Institute, attended a seminar at TU Braunschweig where I learned about the role of computer science in business and at the German Aerospace Center in Braunschweig (DLR) learned about the successes and challenges of the Rosetta Mission from Professor Block.

2015 National **Conrad Spirit of Innovation Challenge** Semifinalist. Created a prototype of a gadget named Static Shock which had the ability to convert static electricity to a usable voltage to charge smart phones, tablets and other technological devices on the go.

2015 International **Tomodachi Toshiba Science and Technology Leadership Academy** Winner, Tokyo, Japan. Selected as one of eight students from the United States by Toshiba and the National Science Teachers Association to participate in the TOMODACHI Toshiba Academy, a cross-cultural STEM exchange and leadership program. I worked together with students in Tokyo to develop a disaster-resilient, smart community of the future. With counsel from Toshiba engineers and a visit to the Toshiba Smart Community building, I worked on developing proposed solutions to these problems using learning experiences central to Next Generation Science Standards and the Engineering Design Process.

RESEARCH PROJECTS

2019 **TU Graz Institute of Neural Engineering**

Event Related Potential Analysis of Curved and Straight-Edged Characters

2015 - 2016 **TJHSST Biotechnology and Life Sciences Research Laboratory**

In vitro Study of the Anti-Proliferative Effects of Dipotassium - trioxohydroxytetrafluorotriborate on the H520 Non-Small Cell Lung Cancer Cell Line (Published in **Genetics & Applications Journal**)

2014 – 2015 **TJHSST Jefferson Underclassmen Multidiscipline Projects Laboratory**

The Effect of Probiotic Bacteria *Lactobacillus acidophilus* strain 314 on Cholesterol Uptake *in vitro*

SKILLS

Lab Techniques: Cell culture, DNA Restriction, Gel electrophoresis, Flow cytometry, Western/Southern Blots, quantitative Polymerase Chain Reaction (qPCR)

Programming: Python, MATLAB, Java, HTML, CSS, LaTeX, Simulink, C++

Languages: English (native), German (Goethe C1), Bosnian (fluent)