IZZEDDIN TEETI

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EDUCATION & SELECTED AWARDS

D.Phil (PhD) Autonomous Vehicles Technologies. Oxford Brookes University, UK   *Jan 2021 - present*

− Research topic: *Novel Deep Neural Network Architecture for Intention & Trajectory Prediction in Autonomous Driving.*

− Project lead for Oxford Brookes Racing Autonomous team.

− Supervisors: Prof Fabio Cuzzolin, Dr Andrew Bradley.

M.Sc Robotics (with distinction). King's College London, UK   *Sep 2018 - Sep 2019*

− Thesis: "*An Innovative Automated Assessment System for Engineering Drawing Sheets*". Based on Computer Vision.

− Supervisor: Dr. Michael Spratling, a Reader in Computational Neuroscience and Visual Cognition.

− Overall Score = Distinction.

− Prize for the best overall performance on the MSc in Robotics for the 2018-2019 cohort.

B.Sc Mechanical Engineering (Excellent). American University of Madaba, Jordan   *Sep 2012 - Aug 2016*

− Final year project: "*Autonomous Tracking Vehicle*". Based on Machine Learning and Computer Vision.

− Overall GPA = 93.1%, excellent.

− Graduated with the first rank among engineering graduates (2016).

− Certificate of Academic Excellence and Dean's List (Semester average $\geq 84\%$) for all semesters (2012 - 2016).

− Undergraduate Academic Excellence Scholarship for four successive years

National High School Diploma (Tawjihi) in Scientific Stream. Arroub High School, Palestine   *2012*

− Overall Score = 98.7%.

− Award for being within the top three matriculants regionally.

INTERNSHIPS & SUMMER SCHOOLS

Incoming Applied Science Intern, Amazon, Berlin, Germany   *Nov 2022 - March 2023*

− Incoming intern at Amazon Germany.

International Computer Vision Summer School (ICVSS), Sicily, Italy   *July 2022*

− Attended the summer school and presented a poster.

Data Science Intern, Bayt.com, Amman, Jordan   *June 2016 - Aug 2016*

− Searched some techniques in Natural Language Processing (NLP), apply them using Python to improve the CV-processing algorithm for Bayt company (one of the largest employment agencies in the Middle East).

− Contact: Yousef Sawalha - y.sawalha@bayt.com

SCHOLARSHIPS, GRANTS & AWARDS

− International Joint Conference of Artificial Intelligence (IJCAI) Registration and Travel Grant (925 $).   *2022*

− Essay Competition Award at the International Computer Vision Summer School (ICVSS).   *2022*

− Oxford Brookes University Full-time Funded Research (DPhil) Studentship (100,000 £).   *2021 - 2023*

− King's College London and the British Council full scholarship (42,990 £).   *2018 - 2019*

− King Abdullah II Design and Development Bureau sponsorship for undergraduate projects (2,800 $).   *2016*

− The American University of Madaba tuition fees Scholarship for excellent students (27,000 $).   *2012 - 2016*

WORK EXPERIENCE

AI Project Lead
Feb 2021 - present

Oxford Brookes Racing Autonomous Team
Oxford, UK

– Leading a team of 25 BSc and MSc students in developing an autonomous driving system for Formula-1 car. The team won 1st and 2nd places in UK IMechE Formula Student AI 2020 and 2021 competitions, respectively.

– Writing the team's yearly plan and milestones. Supervising budget, recruitment, and research&industry connections.

– Contact: Dr Andrew Bradley - abradley@brookes.ac.uk

Robotics Lecturer, Full-time
Sep 2020 - Jan 2021

Al-Zaytona University of Science and Technology
Ramallah, Palestine

– Delivered courses and supervised labs for the BSc Robotics programme.

– Participated in modifying the BSc Robotics programme's structure to include latest technology and suit market needs.

– Contact: Dr Fahoum Shalabi - fahoum.shalabi@zust.edu.ps

Machine Learning Engineer, Full-time
Nov 2019 - Aug 2020

Alpha Omega Biomedical Engineering
Nazareth

– Applied LSTM to build a GPi-navigation software that classified microelectrode recordings series and detected the Striatum-GPe-GPi borders online in Parkinson's disease, with an accuracy of 91.1%.

– Worked inside the operating room with high credentials neurologists, observed the algorithm's performance, recorded feedback, and modified the algorithm accordingly.

– Worked within an AGILE environment and wrote the Software Requirements Specification (SRS) for the GPi-Navigation software.

– Contact: Dr Amir Abedelqadir - a.abedelqadir@alphaomega-eng.com

Research and Teaching Assistant, Full-time
Sep 2016 - June 2018

Birzeit University
Ramallah, Palestine

– Delivered laboratories, such as Control, Technical and Mechanical Drawing, Vibrations, Thermal Applications, Mechanics.

– Designed experiments in the labs, and delivered professional skills workshops for the students.

– Helped the department with administrative tasks and invigilate exams and tests.

– Contact: Mohammad Al Karaeen - mkaraen@birzeit.edu

Research and Teaching Assistant, Part-time
Sep 2017 - June 2018

Palestine Polytechnic University
Hebron, Palestine

– Delivered Mechanical Drawing lab, and discussion lectures for Dynamics, Machines Dynamics, and Control Theory.

– Contact: Iyad Hashlamon - iyad@ppu.edu

RESEARCH

Publications

– **I. Teeti**, S. Khan, A. Shahbaz, A. Bradley, and F. Cuzzolin. *Vision-based Intention and Trajectory Prediction in Autonomous Vehicles: A Survey.* Proceedings of the Thirty-First International Joint Conference on Artificial Intelligence (IJCAI22).

– A. Kanacı, **I. Teeti**, and F. Cuzzolin. *Self-Supervised Pretraining for Object Detection in Autonomous Driving.* Proceedings of the Thirty-First International Joint Conference on Artificial Intelligence (IJCAI22).

– **I. Teeti**, V. Musat, S. Khan, A. Rast, F. Cuzzolin, and A. Bradley. *Vision in adverse weather: Augmentation using CycleGANs with various object detectors for robust perception in autonomous racing.* Safe Learning for Autonomous Driving Workshop at International Conference on Machine Learning (ICML22).

– A. Benjumea, **I. Teeti**, F. Cuzzolin, and A. Bradley. *YOLO-Z: Improving small object detection in YOLOv5 for autonomous vehicles.* International Confernce of Computer Vision (ICCV21).

– I. Fursa, E. Fandi, V. Musat, J. Culley, G. Esteller, **I. Teeti**, L. Bilous, I. V. Sluis, A. Rast, and A. Bradley. *Worsening Perception: Real-Time Degradation of Autonomous Vehicle Perception Performance for Simulation of Adverse Weather Conditions.* SAE International Journal of Connected and Automated Vehicles (SAE Intl. J CAV 2022).

Patents

– Teeti, Izzeddin. 2020. Innovative Automatic Assessment System for Engineering Drawing Sheets. Palestine Patent 355, filed Oct 3, 2019, and issued Dec 15, 2020.

Reviewing

– Serving as a reviewer in reputed conferences including NIPS, BMVC, WACV, CSA.

Invited Talks

– AI in Medical Applications, Palestinian Medical Students Association, Hebron University.   *Feb 2022*
– AI in Self Driving Cars, Google Developer Student Club at Palestine Polytechnic University.   *Dec 2021*
– Weaponized Computer Vision, ArabWIC Palestine.   *May 2020*

SKILLS

Programming	Python, MATLAB, C++, Visual Basic, R, TCL
Framework	Machine Learning (*PyTourch, TensorFlow*), Autonomous Cars (*CARLA*).
Software	ANSYS, CATIA, SolidWorks, PTC Creo, AutoCAD, LaTeX, Microsoft Office
Languages	English (*Proficient User*), Arabic (*Native*), German (*Beginner*), Spanish (*Beginner*)

LEADERSHIP & EXTRACURRICULAR

Founder   Fall, 2019
Palestinian Artificial Intelligence Community   *Palestine*

– I created the first Palestinian AI community which gathers the top students in a sustainable network that enhances their theoretical background and sharpens their practical skills.

Participant   Fall, 2016
World Youth Alliance   *Amman, Jordan*

– I participated in the Emerging Leaders of the Arab Region Program run by the World Youth Alliance (WYA).

Junior Consultant, Volunteer   2015 - 2016
Palestinian Medical Society   *Bethlehem, Palestine*

– I helped the staff in launching their YouTube channel, and in implementing their campaign to their local communities.

Volunteer   2014 - 2015
Our Lady of Peace Center, Theodor-Schneller-Schule   *Amman, Jordan*

– I volunteered to cheer children with special needs and children at orphans' schools.

Tourist Guide   Summer, 2013 & Summer, 2014
Tent of Nations   *Bethlehem, Palestine*

– I escorted groups of tourists around the West Bank, explaining the history of each, and coordinate between the groups.

REFERENCES

Prof. Fabio Cuzzolin
Professor of Artificial Intelligence
Director of the VAIL Laboratory
School of Eng., Comp. and Math.
Oxford Brookes University
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Dr. Michael Spratling
Reader in Computational Neuroscience
and Visual Cognition
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