

Educational Background

2019
2022

PhD Computer Sciences (Dual-Degree),

INSA Rouen Normandie, France & University Teknologi PETRONAS, Malaysia

Thesis: Specular Highlight Detection and Adversarial Generation of Specularity-Free Images using Multi-Domain Translation Network Trained with Polarimetric Data

2016
2017

MSc Electrical & Electronic Engineering,

University Teknologi PETRONAS, Malaysia

Thesis: Real-time underwater 3D scene reconstruction using Kinect v2 time of flight camera

2000
2004

B.E. Mechatronics,

National University of Sciences & Technology, Pakistan

Thesis: Development and control of Bipedal Autonomous Robot (BART)

Research Interests

- Vision and perception
- Generative Models,
- 3D Sensing
- Mobile Robotics
- Mechatronic Systems

Publications

- [1] Atif Anwer, Samia Ainouz, Naufal M Saad, Syed Saad Azhar Ali, and Fabrice Meriaudeau. Joint network for specular highlight detection and adversarial generation of specular-free images trained with polarimetric data. *Neurocomputing*, 559:126769, 2023.
- [2] Clément Germanèse, Fabrice Meriaudeau, Pétra Eid, Ramin Tadayoni, Dominique Ginhac, Atif Anwer, Steinberg Laure-Anne, Charles Guenancia, Catherine Creuzot-Garcher, Pierre-Henry Gabrielle, et al. A retinal oct-angiography and cardiovascular status (rasta) dataset on swept-source microvascular imaging for cardiovascular risk assessment. 2023.
- [3] Atif Anwer, Samia Ainouz, Mohamad Naufal Mohamad Saad, Syed Saad Azhar Ali, and Fabrice Meriaudeau. Specseg network for specular highlight detection and segmentation in real-world images. *Sensors*, 22(17):6552, 2022.
- [4] Atif Anwer. *Specular highlight mitigation using unsupervised multi-domain adversarial generation of specularity-free images inferred from polarimetric data*. PhD thesis, Normandie Université; University Teknologi PETRONAS, Malaysia, 2022.

- [5] Atif Anwer, Syed Hasan Adil, and Fabrice Mériaudeau. Subsea pipeline corrosion estimation by restoring and enhancing degraded underwater images. 2017.
- [6] Atif Anwer, Syed Saad Azhar Ali, Amjad Khan, and Fabrice Meriaudeau. Underwater 3d scanning using kinect v2 time of flight camera. In *Quality Control by Artificial Vision 2017 (QCAV '17), Thirteenth International Conference on*, volume 10338. Spie, 2017.
- [7] Atif Anwer, Syed Saad Azhar Ali, Amjad Khan, and Fabrice Meriaudeau. Underwater 3d scene reconstruction using kinect v2 based on physical models for refraction and time of flight correction. *IEEE Access*, 5:15960–15970, 2017.
- [8] Atif Anwer, Syed Saad Azhar Ali, Amjad Khan, and Fabrice Meriaudeau. Underwater 3d scanning using kinect v2 time of flight camera. In *The International Conference on Quality Control by Artificial Vision 2017*, 2017.
- [9] Atif Anwer, Fabrice Mériaudeau, and Syed Hasan Adil. Customized graphical user interface implementation of kinect fusion for underwater application. In *2017 IEEE 7th International Conference on Underwater System Technology: Theory and Applications (USYS)*, pages 1–6. Ieee, 2017.
- [10] Atif Anwer, Syed Saad Azhar Ali, Amjad Khan, and Fabrice Mériaudeau. Real-time underwater 3d scene reconstruction using commercial depth sensor. In *2016 IEEE International Conference on Underwater System Technology: Theory and Applications (USYS)*, pages 67–70. Ieee, 2016.
- [11] Atif Anwer, Syed Saad Azhar Ali, and Fabrice Mériaudeau. Underwater online 3d mapping and scene reconstruction using low cost kinect rgb-d sensor. In *2016 6th International Conference on Intelligent and Advanced Systems (ICIAS)*, pages 1–6. Ieee, 2016.
- [12] Atif Anwer, Asim Baig, and Rab Nawaz. Calculating real world object dimensions from kinect rgb-d image using dynamic resolution. In *2015 12th International Bhurban Conference on Applied Sciences and Technology (IBCAST)*, pages 198–203. Ieee, 2015.

Professional Experience

2022 Machine Learning R&D Engineer, Apeira Technologies

Tasked with research and development of human post estimation and posture correction algorithms for cyclists.

2022 Postdoctoral Researcher, Université de Bourgogne

Tasked with development of improved segmentation and classification techniques on OCT images.

2015
2016

Co-Founder & CTO, Scifacterz, Islamabad, Pakistan

Robotics Startup venture centered on cutting edge projects in various domains including “NBE (Non Biological Entity)” an open-source, low cost, research platform and Home Service Robot

2004
2016

Manager (Mechatronics), Islamabad, Pakistan

Various research positions in the industry with a combination of Mechanical, Electronics Design research and documentation responsibilities.

Teaching Experience

Teaching Assistant

2023

Teaching - Masters (M2 Health AI), *Image Processing*, University de Bourgogne, France

2022

Teaching - Undergraduate, *Data Analysis and Digital Tools*, INSA Rouen, France

2021

Teaching - Undergraduate, *Data Analysis and Digital Tools*, INSA Rouen, France

2021

Lab Assistant, *Soyez Acteurs du Web!*, INSA Rouen, France

2019

Teaching Assistant, *Probability & Statistics*, UTP,, Malaysia

Languages

Urdu Native

English Fluent

IELTS (Band 8.0)

French Basic

Good Understanding, Medium Speaking

Skills

Frameworks and Languages Tensorflow, OpenCV, Python, MATLAB, C#

3D Modeling and Rendering PTC Creo, Sketchup, Blender

Design and Illustration Photoshop, Affinity Designer, Figma, Corel Draw

Tools Git, \LaTeX , HTML, CSS

Extra Curricular/Pro-Bono

2020

Lead Moderator, *r\ComputerVision* subreddit and discord server

2010

2011

Guest writer - Hardware reviewer, *wccfttech.com*

2007

2012

Lead Server Administrator, *Micronet Broadband Ltd.*, Islamabad, Pakistan

Courses & Certificates

2020

Francais Langue Etrangere,
INSA Rouen, Normandie, France

2019

Deep Learning for Computer Vision with Python,
Pyimagesearch.com,

2017

Practical Python and OpenCV,
Pyimagesearch.com,

2016	Robotic Vision, Queens University of Technology (MOOC)
2012	Advanced Digital Image Processing, Muhammad Ali Jinnah University, Pakistan
2011	Computer Vision, Muhammad Ali Jinnah University, Pakistan
2010	Nonlinear Control Systems, Muhammad Ali Jinnah University, Pakistan
2010	Robust Control System, Muhammad Ali Jinnah University, Pakistan
2010	Pattern Recognition, Muhammad Ali Jinnah University, Pakistan

Achievements

2019 2020	Graduate Assistant Scholarship,, <i>Universiti Teknologi PETRONAS</i> , Malaysia
2016 2017	Graduate Assistant Scholarship,, <i>Universiti Teknologi PETRONAS</i> , Malaysia
2016 2017	1st round favourite, <i>Robot Launch 2014 (Global robotics startup competition)</i> , RoboHub.org
2011	Winner "Intel More to the Core™ Challenge", <i>Intel™</i> , Pakistan
2010	Winner "CPU IQ Blogger Challenge, South Asian region", <i>Intel™</i> , Pakistan
2009	Member Technical Evalution & Judges panel, <i>"RoboSprint 2010"</i> , Air University, Islamabad
2003	Winner "Best Idea Award", <i>"1st National FireFighting Robot Competition (FFRC)"</i> , College of EME , NUST, Pakistan

References

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LITIS Lab

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