

Maham Tanveer

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EDUCATION

PHD COMPUTING SCIENCE

SIMON FRASER UNIVERSITY, BURNABY, CANADA

Supervisor: Dr. Hao (Richard) Zhang

Specialization: Computer Graphics and Vision

MAY 2021 - PRESENT

GPA: 4.2/4.33

Research Interest: Generative AI creativity in imaging, video and animation

MASTER OF ELECTRICAL ENGINEERING

GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, USA

Specialization: Digital Signal and Image Processing

GRADUATED 2020

GPA: 3.7/4.0

Thesis: Utilizing I-Vectors to classify fault sounds in machines using ToyADMOS dataset, under supervisor Dr. David Anderson.

Courses: Advanced Digital Signal Processing, Advanced Image Processing, Advanced Programming Techniques, Physical Design Automation of VLSI Systems, Statistical Machine Learning

BACHELOR OF ELECTRICAL ENGINEERING

NUST SECS, PAKISTAN

GRADUATED 2015

GPA: 3.9/4.0

Majors: Digital Signal and Image Processing, Embedded Systems and Digital Control Systems

Final Year Project: Supervisor: Dr. Yasar Ayaz

Worked on developing the inverse kinematics model to develop a stable kick motion for a humanoid robot.

PUBLICATIONS

Tanveer, Maham, Yizhi Wang, Ali Mahdavi-Amiri, and Hao Zhang. "Ds-fusion: Artistic typography via discriminated and stylized diffusion." In Proceedings of the IEEE/CVF International Conference on Computer Vision, pp. 374-384. 2023.

Tanveer, Maham, Yizhi Wang, Ruiqi Wang, Nanxuan Zhao, Ali Mahdavi-Amiri, and Hao Zhang. "AnaMoDiff: 2D Analogical Motion Diffusion via Disentangled Denoising." arXiv preprint arXiv:2402.03549 (2024).

Yu, Fenggen, Qimin Chen, Maham Tanveer, Ali Mahdavi Amiri, and Hao Zhang. "D² CSG: Unsupervised Learning of Compact CSG Trees with Dual Complements and Dropouts." Advances in Neural Information Processing Systems 36 (2024).

EXPERIENCE

SOFTWARE DEVELOPER

SEDENIUS, ISLAMABAD

AUGUST 2020 - MARCH 2021

Responsibilities

- Develop algorithms and software solutions in C++ specifically with QT and ADTF
- Research and Development of software architecture for higher efficiency, durability and reliability
- Management and mentorship of interns, trainees, and junior developers.

HARDWARE DESIGN ENGINEER**MARCH 2016 - MAY 2018****RWR PVT LTD, ISLAMABAD**

Digital Signal Processing and Embedded System research group

Responsibilities

- Algorithm design and research in Digital Signal Processing domain
- Design, development and testing of embedded systems utilizing FPGA, DSP Kits, ADC's, Keystone II etc.
- Schematic designs of circuits and systems

Achievements

- Worked on developing an algorithm to detect and track radar emitters signals
- Incorporated functionality to detect modulated signals including BPSK, QPSK, Chirp; implemented on Kintex 7 FPGA
- Improved memory management in PCIe interface between Keystone II and Picozed board
- Optimized code for Keystone II by incorporating multi-core architecture on the DSP cores

ANALYST SOFTWARE ENGINEER**AUGUST 2015 - FEBRUARY 2016****AFINITI, ISLAMABAD**

Artificial Intelligence Department

Responsibilities

- Managing databases using MS SQL Server and Visual Studio 2008
- Identification of the patterns in interaction between agents and callers that drive profitable outcomes