Shayan Dadman

Curriculum Vitae

Education

2018–2020 **UiT Tromsø - Narvik**, *M.Sc. in Computer Science: Game Design*.

2012–2017 **IAU - Tehran North** , *B.SE. in Software Engineering* .

Masters Thesis

Title *Synthetic Composition of Music with Artificial Intelligence*

Supervisors Bernt Arild Bremdal (bernt.a.bremdal@uit.no), Rune Dalmo(rune.dalmo@uit.no), Børre Bang (bore.bang@uit.no)

Summary This master dissertation consist of utilizing the neural networks to solve the Music Information Retrieval tasks and Algorithmic Composition of Music. In this project I:

- implemented a guitar tuner in python by taking the inputs in time frequency representation and processing them with convolutional neural networks to distinguish the chords.
- utilized CNNs and RNN LSTMs to solve the music classification tasks such as genre and instrument classification.
- designed an AI-based system to compose a structured Jazz music. The proposed model is character based model inspired by Natural Language Models.

Modules Included

Computer Networks	A	Algorithms Design	A
Analytic and Statistics	A	Compiler Design and Implementation	A
Databases Lab	A	Simulations	A
Numerical Methods	B	Digital Logic Design	A
Advanced Game and Simulator	B	AI and Intelligent Agents	B
Finite Element Methods	A	Software Projects Management	A
Discrete Mathematics	B	Applied Geometry and Special Effects	B

(+47) 9392 3656 • sda091@uit.no • www.dadmaan.com

Fields of Interest

• Audio Processing • Reinforcement Learning • Human-Computer Interaction • Machine Learning • Supervised Learning

Languages

• **English:** B2 • **Deutsch:** A1 • **Norsk:** A2 • **Persian:** Mother-tongue

Experiences

2020–Present **University Lecturer**, *UiT Tromsø*, Narvik, Full time.
Participated in Artificial Intelligence course and Smart Charge project.

2017–2018 **IT Specialist**, *Adak Financial Institute*, Part time.
Enhanced the local network topology and maintained the associated computers.

2016–2017 **Network Consultant**, *Talash Argham*, Part time.
Introduced an efficient system to maintain the associated computers with the web applications.

Web Designer, *IT Orbit*, Internship.
Started this internship to extend my knowledge in EC web development methods.

2015–2016 **UI/UX Designer**, *Zed Trading Company*, Part time.
Led the design team and members of a social marketing department. Designed an e-commerce and a single page web application

Technical Skills

Programming Python, Tensorflow, Keras, C++, Open-GL, HTML, CSS, JavaScript, Sass, Bootstrap, C# ,LaTeX

Software Adobe Family (Illustrator, Photoshop, Lightroom, Premiere, After Effect), Office Suit

OS Windows, Debian, Arch

Courseworks

2019 **Applied Mathematics and Special Effects**, *UiT Tromsø - Narvik*.
Implemented geometric structures and dynamic objects in C++ that continuously change shape with affine-transformation in 3D space.

Artificial Intelligence and Knowledge Based System, *UiT Tromsø - Narvik*.
Implemented deep neural networks with reinforcement learning algorithms DQN and DDPG in Python/Tensorflow to train Walker-2D agent from Mujoco to fulfill the running task.

Robotic Kinematics, *UiT Tromsø - Narvik*.
Evaluated different techniques to implement to control and visualize a robotic arm Lynx-motion AL5D with C++ in Qt platform.

Open-GL and Visualization Techniques, *UiT Tromsø - Narvik*.
Implemented an interactive simulation with Open-GL shader programming and other animation techniques.

Advance Simulation Programming, *UiT Tromsø - Narvik*.
Implemented game physics simulator with investigation of singularities within different scenarios by extending QT's aspect engine in C++.

Hobbies

• Photography • Guitar Playing (Blues and Jazz) • Reading (Philosophy, Psychology, Scientific) • Hiking/Rock-climbing • Cycling/MTB

(+47) 9392 3656 • *sda091@uit.no* • *www.dadmaan.com*