

SYED ZAIN ALI BAQUAR

Machine Learning Engineer - University of California San Diego

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📁 github.com/zainbaq

Recent UCSD graduate specialized in Machine Learning, that combines a strong mathematical mind with a philosophers heart. Determined to use his knowledge for the ever-growing potential of artificial intelligence.

EXPERIENCE

Research Assistant

UCSD (University of California, San Diego)

📅 October 2018 – June 2019 📍 San Diego, CA

- Collaborated with a team supervised by Dr. Gedeon Deak and Dr. Tzyy-Ping Jung in the Swartz Center for Computational Neuroscience (SCCN) at UCSD.
- Conducted experiment to observe brain dynamics during social decision making using EEG and Pupil Labs eye tracking software
- Programmed the game used in the experiment in Python as well as performed the necessary data analysis to evaluate EEG and eye tracker results in MATLAB
- Research published by the Kavli Institute of Brain & Mind

Intern

Pakistan Air Force

📅 June 2017 – August 2017 📍 Karachi, Pakistan

- Audited numerous aerospace engineers on jet engines. Specifically, the inner components and maintenance of all parts of the engine
- Analyzed the process of overhauling damaged engines, through the stages of disassembly and reassembly.
- Aided in the reconstruction of a WP-7B4 engine. Installed the high pressure turbine.

SKILLS AND TOOLS

- Python, Java, MATLAB, HTML, JavaScript, Sound Editing
- TensorFlow, Pytorch, Visual Studio, FL Studio, Linux
- PuTTY, Cyberduck, Node.js, EEGLab, Tkinter
- Jupyter Notebook, Heroku, RStudio

COURSEWORK

- Cognitive Foundations of Mathematics
- Deep Learning & Natural Language Processing
- Interactive Design
- Modeling & Data Analysis
- Neuroanatomy & Physiology, Systems Neuroscience
- Object Oriented Programming: Java
- Supervised Machine Learning Methods
- Sensation & Perception, Learning & Memory, Language

LANGUAGES

- English
- Urdu

PROJECTS

FindARoomate

- Developed a web application that aids the user in finding a place to live
- Implemented Google and Facebook APIs to improve location functionality, accessibility and analytics
- Matched users based on profile matchmaking using entry data

Music Generating Neural Network

- Built a Long Short Term Memory Recurrent Neural Network to generate music
- Trained the model on a corpus of Johann Sebastian Bach's musical pieces
- Implemented a softmax activation function to evaluate transitional probabilities between MIDI tokens

Musician App

- Developed an application to aid musicians to creative glory
- Implemented multiple features including vocal trainer, sheet music notebook and frequency tuner
- Applied preference based matchmaking to link prospective students of music to appropriate instructors

Music Portfolio

- Produced a vast portfolio of original music, published on Spotify
- A mix of electronic and organic instruments including guitar, piano and drums

INTERESTS

- Artificial Intelligence
- Aeronautics
- Engineering
- Music
- Narratology
- The Intellectual Dark Web
- SCUBA Diving

PUBLICATIONS

Decision-Making in a Social Multi-Armed Bandit Task: Behavior, Electrophysiology and Pupillometry