

Muhammad Junaid ALI



PROFILE

Innovative and passionate data scientist and machine learning engineer with over six years of experience in academia and research. Skilled in developing advanced machine learning models for medical imaging, including brain tumor segmentation and survival prediction. Proficient in Python, data analysis, and algorithm optimization, with a focus on solving complex problems and delivering impactful solutions. Experienced in teaching and translating technical concepts into practical applications.

CONTACT DETAILS

@ junaid199f@gmail.com
☎ +33 616 616 683
🌐 github.com/junaid199f
🌐 junaid199f.github.io
✉ 4 rue de la loi, 68100 Mulhouse, France

PERSONAL INFORMATION

Citizenship: **Pakistan**
Languages: **French (A2), English (C1)**

SKILLS

- Python, SQL, PySpark
- Tensorflow, Pytorch, Keras
- Data Science, Optimization
- Flask, CI/CD, Docker
- DevOps
- AWS Cloud, DataBricks, Airflow
- Communication and team collaboration

EXPERIENCE

PHD RESEARCH ASSISTANT at *Universite de Haute Alsace (Mulhouse)* **2021.12–present**

- ◊ Worked on the problem of designing AutoML approaches for medical image analysis tasks. I have proposed multiple AutoML Neural Architecture Search approaches for designing deep learning architectures for 2D/3D medical image classification and segmentation problems.
- ◊ Designed robust NAS approaches which are resilient against different adversarial attacks on medical images and formulated multi-objective NAS approaches for searching lightweight architectures for medical images.

TUTOR/INSTRUCTOR at *Virtual University of Pakistan* **2021.04–2021.11**

- ◊ Teaching and mentoring students in their undergraduate courses.

RESEARCH ASSISTANT at *Medical Imaging and Diagnostics Lab, COMSATS University Islamabad* **2018.06–2021.03**

- ◊ Proposed deep learning algorithms for brain tumour segmentation and breast cancer detection
- ◊ Building of Tashkhees AI App and Deployment of Models into Web Applications

SOFTWARE ENGINEER at *Softbox Technologies, Islamabad* **2017.06–2018.05**

- ◊ Worked on different Machine Learning and Data Science projects
- ◊ Developed Flask modules and frontend interfaces for machine learning applications using Bootstrap and AngularJS.

EDUCATION

PHD IN INFORMATICS *University de Haute Alsace.* **2021–2024**

- ◊ Thesis title: *Automated Machine Learning with Metaheuristics for Medical Image Analysis*
- ◊ Automated Machine Learning, Medical Image Analysis, Evolutionary Algorithms, Deep Learning

MASTER OF SCIENCE IN COMPUTER SCIENCE. *COMSATS University Islamabad.* **2018–2021**

- ◊ Deep Learning, Medical Imaging, Machine Learning, Image Processing.

PROJECTS

NEURAL ARCHITECTURE SEARCH FOR 2D AND 3D MEDICAL IMAGE CLASSIFICATION ◊ In this project, we have proposed an evolutionary Neural Architecture Search approach for 2D and 3D medical image classification and performed a comparative study of multiple meta-heuristics for the given problem. Furthermore, the proposed approach is extended to search for robust architectures against adversarial attacks and searching for lightweight hardware efficient architectures.

TASHKHEES

- ◊ Contributed to the Tashkhees AI diagnostic app for breast cancer detection at MID Lab, COMSATS by incorporating breast cancer and pectoral muscle segmentation AI module and building flask module and frontend using bootstrap. Deployment of the application on the cloud.