# Hamza Javed | PhD, MEng

**Machine Learning Research Scientist**

+1 8254496810 – hamza.javed08@icloud.com – Calgary, Canada

## Skills

- **Coding**: Python, Matlab, Bash, C/C++, Pascal **Tools**: PyCharm, Vim, Git, AWS, Colab.
- **Data Science Packages**: Numpy, Pandas, Sci-kit Learn, Matplotlib, TensorFlow, PyTorch, LangChain.
- **Deep Learning Architectures:** NNs, RNNs, CNNs, YOLO, Transformers, LLMs.

## Experience

**Albus Health,** UK – *Lead Research Scientist* 03/2020 – 08/2022

- Developed signal processing and deep learning pipelines to identify signs of respiratory distress, from 1000s of hours of audio and radar data collected by contactless sensors.
- Designed systems from concept, through to prototyping, testing and insight driven development cycles, before achieving robust performance in deployment.
- Product commercialised and in use by a world leading pharmaceutical company, to monitor patients.

**University of Oxford,** UK – *Postdoctoral Researcher* 08/2017 – 03/2020

- Conducted and published clinical AI research, specifically in the use of machine learning methods to improve healthcare delivery in four Oxfordshire hospitals.
- Developed data-driven models to predict patient health status from multi-modal hospital data (e.g. electronic health records, natural language text, time series sensor data like 12-lead ECG data).

**Imperial College London,** UK – *PhD in Speech Signal Processing* 10/2012 – 04/2017

- Developed perceptual signal quality measures, based on biological models of the auditory system.
- Proposed spherical microphone array filter designs that utilised echoes for improved signal capture.

## Publications & Patents

- Numerous research pieces published in reputable journals and conferences in the fields of signal processing and machine learning. For complete list see Google Scholar profile.

## Education

**Imperial College London,** UK – *PhD in Speech Signal Processing* 10/2012 – 10/2016

- Researched methods to model and mitigate the degradative effects of reverberation on speech.

**Imperial College London,** UK – *MEng in Electrical & Electronic Engineering* 10/2008 – 10/2012

- Graduated with First Class Honours. Specialisation in signal processing.

## Scholarships & Awards

- **Artificial Intelligence in Health and Care Award** (2020-21):
  Recognition and funding awarded by the UK government to Albus Health for our research.
- **Pitch-In Research Grant** (2019-20):
  1 year funding for IoT in hospital project. Named researcher in grant.
- **Erasmus+ Mobility Award** (2016):
  Monthly bursary awarded to undertake a research placement abroad.
- **Audio Engineering Society Educational Foundation Scholar** (2013, 2014):
  Awarded two $5000 bursaries in support of my research in speech and audio signal processing.
- **Imperial College London Scholarship** (2012-15):
  Funding awarded by Electrical and Electronic Engineering department to undertake PhD research.
- **Technical Communication Prize** (2009)**:**
  Adjudicated by the Royal Academy of Engineering for best technical talk, essay and lab report.