

Shourya Verma

15 Schauenburgstrasse • Dossenheim, Germany 69221

Phone: +49 015223753882

E-Mail: shourya.verma@stud.uni-heidelberg.de; shourya10verma@gmail.com;

Objective

I am highly motivated to pursue a career in artificial intelligence and machine learning-based methods in niche application areas in healthcare. With my academic preparedness at Heidelberg University, and internship experiences, my long-term goal is to blend high-end software development, artificial intelligence, and quantum computation for problems concerning medical imaging, bioinformatics, and life sciences.

Education and Skills

University of Glasgow, United Kingdom

BSc (4-year program)

Batch of 2021

BSc in Computing Science and Physics Honors (2:1, Overall B)

Heidelberg University, Germany

MSc (2-year program)

Batch of 2023

MSc in Scientific Computing – (Machine Learning, Visualization, Compressed Sensing, Biotechnology)

Skills: Python, Scikit-learn, Tensorflow, Pytorch, Keras, OpenAI Gym, HTML, CSS, Java, JavaScript, NodeJS, Android Studio, Django, MongoDB, Dart, Flutter, Docker, Kubernetes.

Research Experience

Student Trainee, Division of Intelligent Medical Systems, DKFZ Heidelberg

Apr-Oct 2022

Working on improving generalizability of machine learning based tissue classification by generating domain invariant representation of hyperspectral image data. Lab rotation for scientific computing master's program.

Research Intern, Machine Learning and Database, NHS Golden Jubilee

June-Aug 2021

Extracting patient data from clinical letters and storing them into a NOSQL Database. This data was then used to predict mortality and hospitalization risk in patients using explainable deep learning model. This intelligent database assists clinicians to make informed decisions and provide care to patients in a personalized manner.

Course Assistant, Informed Clinical Decision Making using Deep Learning, Coursera

June-Aug 2021

Course Assistant under Dr Fani Deligianni's supervision, developing MOOC 'Informed Clinical Decision Making using Deep Learning' for **Coursera**. coursera.org/specializations/clin-decision-deep-learning

4th Year Final Projects, Machine Learning and Data Science, University of Glasgow,

2020-2021

- Development of Machine Learning Models to Study Hadron Particles
- Development of Machine Learning Models to Detect Arrhythmia Based on ECG Data – Interpretability

Technology Intern, Software Development Life Cycle, Tata Consultancy Services,

June-July 2020

Learned about different roles in SDLC and delivery models like agile and waterfall. Researched on UK and Europe Fintech Start-ups, covering different technological themes and trends in the IT industry.

3rd Year Software Engineering Project, Augmented Reality App, Obashi Technology,

2019-2020

University Team Project on developing a complex AR based software to view dataflow between two machines/nodes using Unity, Android Studio, WAMP. Awarded **best project** by Obashi Technology, Falkirk.

Technology Intern, WebApp Development, Indian Institute of Technology Kanpur,

June-July 2019

Worked under Professor Sandeep Shukla (Head, Computer Science Department) on a Journal Name sorting and storing application using MongoDB, NodeJS and JavaScript.

Research Intern, Theoretical Chemistry of Complex Systems, University of Frankfurt,

June-July 2018

Worked on computational aspects in photo-physics, and 'Calculation of Two-photon Absorption Cross-section of Phenylamine Dyes' (Research Group of Prof. Dr. Irene Burghardt)

Research Intern, Biological Sciences and Bioengineering, IIT Kanpur

2016-2017

The work involved understanding the effects of nanomaterials on plant growth under environmental stress and biomaterial-based charge storage and supercapacitors. My contributions, as an intern, led to **co-authorship in five published research papers** in peer-reviewed international journals.

Publications and Preprints

<https://www.researchgate.net/profile/Shourya-Verma-2/publications>

1. **Development of a Semi-Automated Database for Adult Congenital Heart Disease Patients.**
Verma, S., Deligianni, F., Veldtman, G. et al.
Canadian Journal of Cardiology, 0828-282X (2022)
2. **Development of Interpretable Machine Learning Models to Detect Arrhythmia based on ECG Data.**
Verma, S.
Arxiv Preprint; Machine Learning (cs.LG) (2022)
3. **Biocharring of natural fibers of insect and plant origin: a green route for the production of 'carbon-based charge storage nanomaterials'.**
Dubey, A., Jangir, H., **Verma, S.** et al.
Mater Renew Sustain Energy **7**, 20 (2018)
4. **Nano-pyrite seed dressing: a sustainable design for NPK equivalent rice production.**
Das, C.K., Jangir, H., **Verma, S.** et al.
Nanotechnol. Environ. Eng. **3**, 14 (2018)
5. **Sequential entrapping of Li and S in a conductivity cage of N-doped reduced graphene oxide supercapacitor derived from silk cocoon: a hybrid Li-S-silk supercapacitor.**
Jangir, H., Pandey, M., **Verma, S.** et al.
Appl Nanosci **8**, 379–393 (2018)
6. **An eco-friendly, low-power charge storage device from bio-tolerable nano cerium oxide electrodes for bioelectrical and biomedical applications.**
Dubey, A., Jangir, H., **Verma, S.** et al.
Biomed. Phys. Eng. Express **4** 025041 (2017)
7. **The seed stimulant effect of nano iron pyrite is compromised by nano cerium oxide: regulation by the trace ionic species generated in the aqueous suspension of iron pyrite.**
Das, C.K., Dubey, A., **Verma, S.** et al.
RSC Adv. **6**, 67029-67038 (2016)

Referees

Dr Fani Deligianni

Fani.Deligianni@glasgow.ac.uk

School of Computing Science
University of Glasgow

Dr Christos Anagnostopoulos

Christos.Anagnostopoulos@glasgow.ac.uk

School of Computing Science
University of Glasgow

Dr Gruschen Veldtman

gruschen.veldtman@gjnh.scot.nhs.uk

National Health Services Scotland
Golden Jubilee Hospital, Glasgow

Dr Lena Maier-Hein,

[contact](#)

Head of Department (IMSY)
DKFZ, Heidelberg