Vedang Joshi

CONTACT INFORMATION

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EDUCATION

King's College London, London, UK **Oct 2023 - Present**

Doctor of Philosophy - PhD, Computational Engineering
Research Interests: Development of theoretical and computational fluid dynamical techniques to model natural swimming flow problems. Focus on the emergence of swarming behaviours in fish.
Part-time PhD, funded by Boeing Defence UK Ltd.
Advisors: Dr. Julia Li and Prof. David Moxey

University of Bristol, Bristol, UK **Sept 2018 - Jul 2022**

Master of Engineering - MEng (Hons), Engineering Mathematics
Dissertation: A lateral line sensor based mechanistic algorithm for emergent fish schooling behaviours in multi-agent swarms
Advisors: Prof. Sabine Hauert and Dr. Elliott Scott
Activities and Societies: Bristol Engineering Mathematics Soc, Bristol Swimming Soc, Bristol Ice Skating Soc.

INDUSTRY EXPERIENCE

The Boeing Company, London, UK

Software Engineer II **Sept 2024 - Present**

Responsibilites include leading requirements capture, technical lead roles in core development, high level design documentation for R&D projects, BoE and Business and Technical User Story development. Other responsibilities include internal code reviews, UAT/V&V technical lead responsibilities and stakeholder engagement on BDUK software engineering projects.

Rotational Graduate Scheme **Sept 2022 - Sept 2024**

Two-year graduate rotational scheme with 4×6 month rotations around the UK.

- Market Intelligence Lead, Prosperity & Economic Data Engineer, UK Defence Solutions Centre (Secondment), Farnborough, UK [Jan 2024 - Sept 2024]
- Strategic Experimentation & Analysis, Fleet, UK [Sept 2023 - Dec 2023]
- Research, Development & Engineering Strategy, Bristol, UK [March 2023 - Aug 2023]
- TLCS-2 Project Engineering, Gosport, UK [Sept 2022 - Feb 2023]

RESEARCH EXPERIENCE

University of Cambridge, Cambridge, UK **Jun 2021 - Sept 2021**

Research Assistant, Epidemiology and Modelling Group

- Advisors: Dr. Renata Retkute, Dr. Cerian Webb and Prof. Chris Gilligan
- Spatially-explicit stochastic dynamic epidemiological simulations on Citrus Huanglongbing.
- Modelling the spread of tree pests through road networks using stochastic simulations. Efforts acknowledged in Modelling the spread of tree pests and pathogens in urban forests.

Imperial College London, London, UK **Jun 2020 - Oct 2020**

Research Assistant, Biomathematics Group

- Advisors: Dr. Florian Klimm and Prof. Nick Jones
- Node-centralities in mitochondrial protein interaction networks for predicting gene essentiality.

Teaching Experience

University of Bristol, Bristol, UK

Demonstrator (Teaching Assistant) **Jan 2022 - May 2022**
EMAT10006 Further Computer Programming: Fundamentals of programming in Python. Taught basic software engineering skills (OOP etc.) and collaborative programming skills.

Demonstrator (Teaching Assistant) **Sept 2021 - May 2022**
EMAT22220 Mathematical and Data Modelling 2: Coursework based module designed to apply mathematical modelling and data analysis skills to the solution of problems of academia & industry.

Demonstrator (Teaching Assistant) **Sept 2020 - May 2021**
EMAT10704 Discrete Mathematics 1: Number systems and arithmetic, logic and proof, sets, relations and functions. Includes graph theory, and the link between continuous and discrete mathematics. Mode of teaching split between online and face-to-face learning.

Achievements

The Boeing Company Cash Prize **2023**

Research, Development & Engineering Strategy, Nov 2023
Going above and beyond to conduct testing in support of an IRAD growth project during my second 6 months in the graduate scheme.

TLCS-2 Project Engineering, May 2023
Delivering the responsibilities of a Project Engineering level 4 Technical Lead Engineer during the first 6 months of the graduate scheme.

Academic Achievement Award **2018**

Royal Wootton Bassett Academy
One of 18 recipients: For outstanding achievement in A-Level results

Award for Services to the School & Community **2018**

Royal Wootton Bassett Academy

Bronze, Silver Medal **2015, 2016**

UK Mathematics Challenge

Technical Skills

- **Programming Languages**: Python, MATLAB
- **ML/Statistical learning frameworks [Python]**: Classification (Latent Dirichlet Allocation), Regression (Extra-trees, Sequential Forward Selection), Time series, Clustering (KNN), Feature engineering (Dynamic time warping), Natural Language Processing (NLP), Markov chains
- **High Performance Computing (HPC)**: SLURM, Moab/Torque proficient
- **Software**: Maple, Jupyter, QGIS (Geographic Information System), GitHub, MS Office Suite
- **Project Management**: JIRA
- **Typography**: LaTeX

Memberships and Affiliations

Associate Member, The Institute of Mathematics and its Applications, UK

Languages

English **Native proficiency**

Marathi **Native proficiency**

French **Professional working proficiency**

References

Available upon request