**A person in a suit and tie

Description automatically generatedPENGXIANG WANG (Shawn)**

shawn.pxwang@gmail.com ∙ [Homepage & Blog](https://pengxiang-wang.com/) (pengxiang-wang.com)

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**Summary:** PhD candidate in applied mathematics, math background + 5 years of experience on *machine learning*, currently researching *continual learning*

**EDUCATION**

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|  | [**University of Bristol**](https://www.bristol.ac.uk/)**,** [**School of Engineering Mathematics**](https://www.bristol.ac.uk/engineering/schools/eng-maths-tech) | Dec 2023 - Dec 2024 |
| Visiting Research Associate, Supervisor: [Prof Weiru Liu](https://research-information.bris.ac.uk/en/persons/weiru-liu), [Prof Jun Hong](https://people.uwe.ac.uk/Person/JunHong) | Bristol, UK |
| A logo with a black and red circle  Description automatically generated | [**Peking University**](https://english.pku.edu.cn/)**,** [**School of Mathematical Sciences**](http://english.math.pku.edu.cn/) | Sep 2020 - Present |
| PhD Candidate, Applied Mathematics, Supervisor: [Dr Kedian Mu](http://english.math.pku.edu.cn/Faculty/Facuity/ALL/old_site_Faculty_ALL_2_80.htm) | Beijing, China |
| A logo of a tree with a bird in the middle  Description automatically generated | [**Beijing Institute of Technology**](https://english.bit.edu.cn/)**,** [**School of Maths and Statistics**](https://math.bit.edu.cn/) | Aug 2016 - Jul 2020 |
| Bachelor of Science, Information and Computing Science  Average Score: 91.5/100 Rank: 2/37 Awarded Outstanding Graduate | Beijing, China |

**PUBLICATIONS**

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| **[AdaHAT: Adaptive Hard Attention to the Task in Task-Incremental Learning](https://link.springer.com/chapter/10.1007/978-3-031-70352-2_9)**   * Developed a novel continual learning architecture with adaptive gradient adjustment mechanism, making full use of information from tasks * Resolved network capacity problem and balanced stability-plasticity trade-off | 1st Author, 2024  [ECML PKDD](https://ecmlpkdd.org/)  Conference |
| **[Predicting Student Performance Using Weblogs](https://ieeexplore.ieee.org/document/8845440)**   * Predict student learning performance through anonymized weblog data with an LSTM-based model | 2019  [ICCSE](http://www.ieee-iccse.org/2019/index.html)  Conference |

**SKILLS**

* **Programming:** Python (Primary), C & C++, MATLAB. Fluent in academic writing with LaTeX
* **Languages:** English (Fluent), Mandarin Chinese (Native), Japanese (Beginner)

**OPEN-SOURCE SOFTWARE**

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| **[Continual Learning Arena (CLArena)](https://pengxiang-wang.com/projects/continual-learning-arena/)**   * Open-source Python package for CL research (published in [PyPI](https://pypi.org/project/clarena/)) * Implemented multiple CL algorithms, datasets and backbones * Ideal platform for CL research experiments and applications | 2023 – Present  Sole Developer |

**TEACHING EXPERIENCE**

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| **Math Teaching Assistant at Peking University**   * Courses: Advanced Mathematics (Calculus), Probability and Statistics * Conducted tutorial and QA sessions for undergraduate students | 2020 – Present |

**SELECTED TALKS**

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| [**Architecture-Based Approaches in Continual Learning**](https://pengxiang-wang.com/slides/slides-architecture-based-continual-learning.pdf)   * Literature review on a specific methodology in CLresearch, which is what I am currently researching. Brief intro to the AdaHAT model | 31/10/2024  [National Frontier Math PhD Forum](https://www.math.pku.edu.cn/kxyj/xzky/162204.htm) |
| **[A Beginner’s Guide to Continual Learning](https://pengxiang-wang.com/slides/slides-continual-learning-beginners-guide.pdf)**   * A comprehensive guide to CL concepts, definitions, methodology and challenges, as well as cutting-edge research developments | 03/10/2024  UoB FinTech Seminar |

**SELECTED AWARDS**

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| Mathematical Contest in Modeling (MCM) | International | Meritorious Winner | 2019 |
| Chinese Mathematics Competitions | National | Second Prize | 2018 |
| Chinese Physics Competitions (Regional) | National | First Prize | 2017 |
| Outstanding Student | University | 2017-2019 at BIT, 2024 at PKU | |
| Social Worker Award | University | 2022-2023 at PKU | |