

# Bohan Wang

## Curriculum Vitae

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Languages: English, Mandarin, Cantonese



### Education

Feb 2025 **Master of Science in Data Science**, *Boston University, USA*

Jun 2023 **BSc (Hons) in Data Science**, *Hong Kong Baptist University (Zhuhai), China*

### Relevant Coursework

**Mathematics & Statistics:** Calculus, Linear Algebra, Regression Analysis, Stochastic Processes, Statistical Computing, Optimisation Methods

**Computer Science & Algorithms:** Structured Programming, Data Structures and Algorithms, Design and Analysis of Algorithms, Database Systems

**Machine Learning & AI:** Machine Learning, Artificial Intelligence, Data Mining, Deep Learning

**Specialized Topics:** Cloud Computing, Computer and Network Security, Cybersecurity, Crypto for Data Science, Data Visualization

### Research Experience

2025–Present **AI Algorithm Engineer (Research)**, *Guangzhou Laboratory, China*

Conduct interdisciplinary research at the intersection of AI and computational biology.

2024 **Master's Thesis**, *Boston University, USA*

#### **Image Reconstruction Through Multiple 1D Approximations**

Discovered a greedy + dimensionality reduction algorithm for image reconstruction. Improved fine-grained detail preservation compared to standard methods.

*Paper available: <https://open.bu.edu/items/d800558c-a02f-4356-86ea-86290eb0d72a>*

2023 **Bachelor's Thesis**, *UIC, China*

#### **Multi-stage Image Restoration with Neural Networks**

Developed EMRNet on top of MPRNet using ACA, SAB, and SCAM modules; improved denoising, deblurring, and deraining performance.

2022–2023 **AI Algorithm Engineer (Research)**, *Guangzhou Bona Robotics Co., Ltd., China*

Trained models on Huawei Ascend chips (MindSpore), reaching the Huawei Ascend AI Innovation Competition Final.

### Academic Projects

2025 **CUHK Medical Robotics Lab** – Image recognition module for robot-assisted medical diagnosis.

2024 **Data Days for Good (BU)** – Built R Shiny dashboard and NLP pipeline to analyze survey data.

2023 **Geospatial Fairness in Public Transit** – Analyzed U.S. Census data to quantify racial commute disparities.

2022 **NLP for Mental Health** – GPT-3-based chatbot with emotion-aware responses.

2021 **Lung X-ray AI Analysis** – CNN/ResNet pneumonia classifier achieving 95% accuracy.

2021 **Sneaker Trading Platform** – Full-stack Django site with MySQL and automated scraping.

2021 **Books Search System** – Hadoop–Spark–Django pipeline for large-scale keyword retrieval.

## Technical Skills

Programming: Python, R, SQL, C, Java

Machine Learning: PyTorch, TensorFlow, CNNs, YOLOv7, Neural Fields

Computational Biology: Scanpy, Seurat, Spatial Transcriptomics, Trajectory Inference

Data Processing: Pandas, NumPy, SciPy, AnnData

Tools: Git, Linux, Docker, Jupyter, Hadoop/Spark

## Awards & Honors

2022 Honorable Mention, Mathematical Contest in Modeling (MCM)

2021, 2022, University Second-Class Scholarship (BNBU, BU)

2024