



Md. Jahidul Islam

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Date of birth: 21/11/1996 **Nationality:** Bangladeshi

ABOUT ME

I am highly motivated to contribute effectively to the education and research sectors. My commitment to fostering a friendly and cooperative environment is unwavering. I strive to apply my knowledge while maintaining the utmost honesty and punctuality. I am eager to explore innovative solutions to complex challenges. With a strong foundation in research methodologies, writing, and presentation, I am well-prepared to make meaningful contributions to the advancement of knowledge and the betterment of society and institutions.

EDUCATION AND TRAINING

[01/09/2024 – Current] **Doctor of Philosophy (Ph.D.)**

University of Chinese Academy of Science (UCAS) <https://englishucas.ac.cn/>

City: Beijing | **Country:** China |

[01/09/2021 – 31/07/2024] **Master of Science (MSc)**

Northeastern University <https://english.neu.edu.cn>

City: Shenyang | **Country:** China | **Field(s) of study:** Software Engineering | **Final grade:** 3.79 | **Thesis:** A Novel Surgical Instruments Segmentation Method Based on Improved SAM

[01/09/2022 – 20/02/2023] **Practical Training (Internship)**

Neusoft Project Management System <https://www.neusoft.com>

City: 177-1 Chuangxin Road, Hunnan District, Shenyang City, Liaoning Province | **Country:** China |

[01/09/2017 – 15/06/2021] **Bachelor of Science (BSc)**

Chongqing University of Posts and Telecommunications <http://english.cqupt.edu.cn/>

City: Chongqing | **Country:** China | **Field(s) of study:** Software Engineering | **Final grade:** 3.00 | **Thesis:** Shadow detection algorithm and implantation based on deep learning

[01/09/2016 – 15/06/2017] **Chinese Language Proficiency**

Chongqing University of Posts and Telecommunications <http://english.cqupt.edu.cn/>

City: Chongqing | **Country:** China | **Field(s) of study:** Chinese Language

RESEARCH EXPERIENCE

[01/12/2022 – 30/06/2024]

Graduate Researcher

Advisor: Professor Ke Mingmao, Professor, Software College, Northeastern University, China

- Conducted research on "A Semi-Supervised Learning Method for Automatic Surgical Instrument Segmentation."
- *Design and Implementation of a Novel and Robust Adapters_SAM Architecture for Efficiently Reducing the Total Number of Segment Anything Model (SAM) Parameters.*

[01/09/2020 – 15/05/2021]

Undergraduate Researcher

Advisor: Professor Huang Ying, Professor, Software Collage at CQUPT, China,

- Conducted research on "Shadow detection algorithms and implementation based on deep learning".
- Design the architecture and algorithm based on a deep learning approach.

[10/01/2022 – Current]

Research Assistant

Advisor: Dr. Md Rafiqul Islam, Senior Lecturer, Department of Information Systems, Australian Institute of Higher

Education (AIH), Australia; Founder and Director, Research for Advanced Health and Information Analytics (RAHIA) Lab

- Explored the application of data mining techniques.
- Collaborated with Dr. Md Rafiqul Islam on the research process

Advisor: Mohammad Mamun, Director and Instructor, CHINTA Research Bangladesh, Bangladesh

- Research contributions through active involvement in several projects and expanding expertise in research methodologies.
- Collaborating on research papers and manuscripts for peer-reviewed journals, gaining valuable insights into the publication process
- Mentoring and training new research interns, further developing research skills while contributing to their growth.

[15/05/2023 – 30/12/2023]

Research Internship

Advisor: Mohammad Mamun, Director and Instructor, CHINTA Research Bangladesh, Bangladesh

- Gained proficiency in statistical analysis software such as SPSS while acquiring hands-on experience in research methodologies.
- Developed foundational research skills, including literature review, hypothesis formulation, and research design, while actively participating in journal reviews and manuscript preparation.

PUBLICATIONS

International Journal Paper

1. **Islam, Md. Jahidul**, and Omar Faruq, "Further Exploration of Deep Aggregation for Shadow Detection", MIST: Modern Innovations, Systems, and Technologies, Vol. 2, No. 3 (2022), <https://doi.org/10.47813/2782-2818-2022-2-3-0312-0330>
2. **Md. Jahidul Islam**, Md. Emran Hasan, Md. Rafiqul Islam, and Shahid Ali, "AgroSathi: A Novel System for Detecting and Diagnosing Insect Pests for Field Crops", under blind review in the Elsevier journal

3. Md Emran Hasan, **Md Jahidul Islam**, Md Rafiqul Islam, Dong Ming Chen, and Guandong Xu's "Applications of Artificial Intelligence for Health Informatics: A Systematic Review", "JAIMS: Journal of Artificial Intelligence for Medical Science", Vol 4 (2), December 2023, pp. 19–46, <https://doi.org/10.55578/joaims.230920.001>; eISSN: 2666-1470.
4. Faruq Omar; **Islam Md. Jahidul**; Ahmed Md. Sakib; and Hossain, Md. Sajib, "Brain Tumor MRI Identification and Classification Using DWT, PCA, and KSVM", TechRxiv. Preprint (2022), <https://doi.org/10.21203/rs.3.rs-2562932/v1>
5. Faruq Omar; **Islam Md. Jahidul**; Ahmed Md. Sakib; and Hossain, Md. Sajib, "Identification and Classification of Brain Tumor MRI Using DWT, PCE and KSVM", IEEE's. Preprint (2022), Techrxiv, <https://doi.org/10.36227/techrxiv.21771329.v2>
6. Faruq Omar; **Islam Md. Jahidul**; Ahmed Md. Sakib; and Hossain, Md. Sajib, "Identification and Classification of Brain Tumor MRI Using DWT, PCE, and KSVM," accepted for publication in "Electronic Letters on Computer Vision and Image Analysis."
7. S. T. Ahmed, **I. M. Jahidul**, and R. M. Mamunur, "IOT-Based Smart Home Automation and Security System," published on IJSRD, International Journal for Scientific Research & Development, Vol. 10, Issue 2, 2022, ISSN (online): 2321-0613.
8. Hafia Rafia Tahira, Hamza Fida, **Md Jahidul Islam**, and Omar Faruk, "Analysis of Thyroid Nodule Ultrasound Images by Image Feature Extraction Technique," Under review in Journal of MIST: Modern Innovations, Systems, and Technologies.

WORK EXPERIENCE

[01/09/2021 – Current] **Graduate Research Assistant**

Northeastern University

City: Shenyang | **Country:** China

- Contribute to cutting-edge research in image processing, leveraging advanced algorithms and techniques to analyze, manipulate, and enhance images for segmentation based on different deep-learning methods
- Assist in the development and implementation of novel image processing methodologies, conduct extensive experimentation, and analyze results to support data-driven insights and advancements in the field
- Collaborate closely with a multidisciplinary research team, including faculty, graduate students, and industry partners, to achieve project milestones and contribute to academic publications and conference presentations

[15/01/2020 – 30/09/2020] **Application software developer**

Neusoft

Address: Building A2-301, CNU, No.1 Neusoft Road, Qingchengshan, Dujiangyan, 611844, Chengdu, China

- Led the design, development, and optimization of robust and scalable backend systems utilizing the Java Spring Boot framework.
- I worked closely with cross-functional teams to gather requirements, analyze system architecture, and translate business needs into efficient and maintainable code solutions.
- Implemented RESTful APIs, micro-services, and database interactions to enhance web application functionality, security efficiency, and performance.
- Gracefully resolved complex technical challenges, maintained code quality through code reviews, and contributed to continuous integration and deployment processes, ensuring the delivery of high-quality software on schedule

Reviewer of Journals Experience

Journal of Science, Engineering, and Technology (JET): Image Processing, Q1, Scopus, WOS
31/10/2022 – Current

- Conducted comprehensive peer reviews for three research articles, ensuring the quality and validity of the published work.
- Collaborated with authors to provide constructive feedback on methodology, statistical analysis, and overall content.
- Assessed submissions for adherence to journal guidelines and recommended acceptance, revisions, or rejection to the editorial board.
- Regularly met deadlines for reviewing and providing feedback within the stipulated time frame.

Journal of Electronic Letters on Computer Vision and Image Analysis (ELCVIA): Q4, Scopus

15/05/2023 – Current

- Consistently reviewed 2-3 research papers annually, demonstrating dedication to the peer review process.
- Facilitated communication between authors and the editorial team, fostering a smoother publication process.
- Contributed to the journal's quality by evaluating articles on their scientific merits, relevance, and clarity.

Journal of Informatics, Control, and Measurement in Economy and Environmental Protection (IAPGOS): BazTech, DOAJ, Google Scholar

02/10/2023 – Current

- Evaluated the methodology, data analysis, and overall quality of submitted manuscripts.
- Contributed to the improvement of manuscript quality and adherence to journal standards.

PROJECTS

International Dormitory Entrance

- Developed a novel deep-learning model for face recognition.
- Achieved impressive recognition accuracy on the test dataset.
- Demonstrated proficiency in implementing cutting-edge deep-learning techniques.

Air-ticket Booking System(Starlight)

- Designed and implemented a comprehensive web-based air ticket booking system.
- Integrated a robust database backend with SQL connectivity.
- Showcased strong web development and database management skills.

Subway Maintenance System

- Monitored subway system status in real-time through sensors and data streams, providing a user-friendly dashboard.
- Recorded inspection reports and captured issues and reports for performance analysis
- Generated maintenance schedules based on asset condition and usage

Neusoft Opportunity Project Management System

- Designed to assist businesses in managing various projects and opportunities effectively
- The system incorporates various technologies to provide a robust and feature-rich project management solution
- Offered a user-friendly interface, robust security features, and integration options.

SKILLS

Language Proficiency

- **English** - IELTS: 6.0
- **English** - Duolingo: 105

- **Chinese** - HSK4: 187
- **Bangla** - Native

Technical Expertise

- **Language:** Python, Java, C, JavaScript, Vue.JS, Flask, Django, Spring Boot, HTML, CSS, Matlab (intermediate)
- **Databases:** MySQL, PostgreSQL, SQLite, and Oracle
- **Libraries:** OpenCV, TensorFlow, Keras, Pytorch, NumPy, Pandas, Matplotlib, Sklearn, SciPy
- **ML Algorithms:** SVM, KNN, PCA, GRU, LSTM, SGD, Linear and Logistic Reg, Decision Trees, Random Forest
- **DL Algorithms:** FNN, CNN, RNN, GAN, XAI, Transformer, Autoencoders, Attention Mechanisms, Transfer Learning, NLP
- **Tools:** Git, Apache Web Server, Tomcat Web Server, Google Colab, Jupyter Notebook, Kaggle, and VS Code
- **Operating Systems:** Mac, Windows, and Linux

Knowledge in Technology

- Data analysis with Python
- Data Visualization with Python
- Deep learning with PyTorch, TensorFlow, and OpenCV
- Knowledge of Virtualization
- Machine learning with Python
- Good knowledge of probability and statistics

Professional Courses

- Industrial and Information Technology Talent Professional Knowledge Evaluation Certificate from Neusoft
- Neural Networks and Deep Learning from Coursera
- Advanced Python Programming Training from Udemy
- Python for Data Science from Coursera
- Training workshops and green technology from CAS-TWAS Center
- AI and development from Google
- Practical learning about research from CHINTA Research Bangladesh
- Linux Server Administrator from the CSL Training Institute

HONOURS AND AWARDS

The following achievements are -

- Awarded an **Alliance of International Student Organizations (ANSO) Scholarship** under the University of Chinese Academy of Science (UCAS) in 2024.
- Awarded **Chinese Government Scholarship** under the Chinese Scholarship Council (CSC) in 2021.
- I enjoyed the **Chongqing Municipal Government Mayor Scholarship** for outstanding international undergrad students in 2017.
- **Department Prize for Outstanding Student Performance**, Chongqing University of Posts and Telecommunications (CQUPT)
- Selected as a representative of the **International Students Association, Bengali Community**, at CQUPT in 2020
- **Ordinary performance appraisal:** well performed, abides by rules and regulations, no violation
- **Best Volunteer Award** from the CQUPT Cultural Festival

List of participation -

- Fairness of AI in Medical Imaging, Virtual workshop, Nov 6th, 2023, Organized by: Technical University of Denmark
- Seminar: Federated Learning: The Good, the Bad, and the Ugly in 2023
- Webinar: Joined the (IBRO) International Brain Research Organization webinar, 2023 for How to publish in IBRO Journal
- International Conference on Communication Software and Networks (ICCSN 2023)
- World Gold Technology Conference and China Gold Industry Whole Industry Chain Innovation Forum
- The 5th International Conference on Industrial Artificial Intelligence 2023
- The 17th International Academic Conference on Wireless Algorithms, Systems and Applications
- The 5th Xinghai International Conference on Cardiovascular Diseases

RECOMMENDATIONS

Name: Dr. Shanshan Wang Professor

Professor of Paul C Lauterbur Research Center,
Shenzhen Institute of Advanced Technology (SIAT),
Chinese Academy of Science (CAS)

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Link: <https://people.ucas.edu.cn/~ShanshanWang?language=en>

Name: Mao Keming Associate Professor

Software College,
Northeastern University, China

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Name: Md Rafiqul Islam Senior Lecturer

Department of Information Systems,
Australian Institute of Higher Education(AIHE), Australia

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