

# Md Abrar Jahin, CSCA<sup>TM</sup>

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Citizenship: Bangladesh

[GitHub](#)

[LinkedIn](#)

[Personal Website](#)

[Google Scholar](#)

[ResearchGate](#)

[ORCID](#)

## Education

### University of Southern California

Ph.D. in Computer Science

- USC Graduate Fellowship for 2025-2026
- Co-advised by [Prof. Craig Knoblock](#) and [Prof. Jay Pujara](#)

Los Angeles, CA, USA

Aug 2025 – Present

### Khulna University of Engineering & Technology

B.Sc. Eng. in Industrial & Production Engineering

CGPA: 3.83/4.00 (Top 5% of class)

- Dean's award: 2018-2019, 2019-2020, 2020-2021
- Thesis title: Supply Chain Backorder Prediction Using Interpretable Hybrid Quantum-Classical Neural Network [[The-sis Presentation](#)] [Supervisor: [Dr. Md. Saiful Islam](#)]
- Developed the first-ever LaTeX template for B.Sc. Undergrad Thesis of KUET [[Template](#)]
- [Google Knowledge Panel](#) of Md Abrar Jahin

Khulna, Bangladesh

Nov 2018 – Mar 2024

## Research Interests

- † Efficient Deep Learning (DL)
  - *Geometric & Spiking Neural Networks, Kolmogorov-Arnold Networks (KAN), Physics-informed Neural Networks (PINN)*
- † Quantum Computing
  - *Quantum Machine Learning (QML)*
- † Trustworthy AI
  - *Explainable AI (XAI)*
  - *Uncertainty Quantification*
    - ◇ *Conformal Prediction*
- † Self-Supervised Learning (SSL)
  - *Contrastive Learning*
- † Reinforcement Learning (RL)
  - *Inverse RL, Imitation Learning*
- † Natural Language Processing (NLP)
  - *Sentiment Analysis*

## Research Experiences

### ❖ Lead Researcher

Mar 2023 – Present

*Advanced Machine Intelligence Research Lab (AMIRL), American International University-Bangladesh (AIUB)*

Roles: Research Assistant (Mar 2023 - Dec 2023), Researcher (Dec 2023 - Feb 2024), Lead Researcher (May 2024 - Present)

Research Affiliations:

- ◆ Department of Natural Language Processing and Computational Linguistics  
Supervisor: [Prof. M. F. Mridha](#) (Professor, Dept. of CS, AIUB)
- ◆ Collaborators: [Prof. R. Simon Sherratt](#) (IEEE Fellow), [Prof. Nilanjan Dey](#), [Prof. Jungpil Shin](#), [Prof. Yuichi Okuyama](#), [Prof. Zeyar Aung](#), [Prof. Yutaka Watanobe](#), [Prof. Md. Rashedul Islam](#)
  - Published **6 WoS Q1** journal articles and **1 CORE ranked** conference article, and 14 are under review in Q1 journals (concentration: DL, QML, GNN, XAI, conformal prediction, human-in-the-loop, NLP, and operations research).

### ❖ Visiting Researcher (VR)

Mar 2024 – Mar 2025

*Physics and Biology Unit, Okinawa Institute of Science and Technology Graduate University (OIST), Japan*

Supervisor: [Prof. Jonathan Miller](#) [BS (Yale); PhD Biology (Cambridge); PhD Physics (Caltech)]

Research project: Evolution of Strongly Conserved Sequence [[Code Repository](#)]

- [[FY2023 Annual Report](#)] [[OIST Affiliation](#)]

### ❖ Visiting Research Student (VRS)

Feb 2023 – Feb 2024

*Physics and Biology Unit, OIST, Japan*

Supervisor: [Prof. Jonathan Miller](#) [BS (Yale); PhD Biology (Cambridge); PhD Physics (Caltech)]

Research project: Evolution of Strongly Conserved Sequence [[Certificate](#)]

Collaborators: [Dr. Lucia Žifčáková](#), [Dr. Priscila Do Nascimento Biller](#), [Dr. Zdenek Lajbner](#), and [Dr. Reuven Pnini](#)

- Critically analyzed and visually represented all potential combinations of inter-gap segments (IGS), ancestral repeats (ARs), and contiguous mismatched ARs in human/mouse and human/gorilla genome alignments, focusing on both DNAs and repetitive sequences.
- Successfully replicated the findings of the neutral indel model proposed by [Lunter, Pointing, and Hein \(2006\)](#).

#### ❖ Research Lead

May 2022 – Mar 2023

Research Camp 02, Scholarship School BD, Bangladesh

Supervisor: [Dr. Mohammad Arafat Hussain](#) (Post-doctoral Research Fellow at Image, Informatics & Intelligence Research Lab, Harvard Medical School; PhD in Biomedical Eng., UBC Canada; MASc in Biomedical Eng., UBC)

- Led the research team of 17 fellow researchers as a co-first author on a project titled “[Ultrasound-Based AI for COVID-19 Detection: A Comprehensive Review of Public and Private Lung Ultrasound Datasets and Studies](#)”.
- Contributed to writing the original manuscript, software implementation, and data curation and served as a corresponding author for the entire communication with the journal.

#### ❖ Research Intern (RI)

Oct 2021 – Mar 2022

Physics and Biology Unit, OIST, Japan

Supervisor: [Prof. Jonathan Miller](#) [BS (Yale); PhD Biology (Cambridge); PhD Physics (Caltech)]

- Awarded a full-funded scholarship with a daily allowance of JPY 2400 per working day (taxable) [[Offer Letter](#)] [[RI Agreement](#)] [[Internship Certificate](#)] (acceptance rate: 14%)
- Tracked erroneous out-of-bound PCS coordinates generated by [Nash and Lenhard \(2018\)](#), utilizing R and Bedtool, and resolved complexity issues using Python 3.10.
- Demonstrated shell scripting and parallel computing proficiency on the HPC Deigo cluster.
- Conducted research on perfectly conserved sequence (PCS) length distributions of UCSC 44 pairwise genome sequences.
- Analyzed quantile kurtosis of PCS lengths proposed by [Nash and Lenhard \(2018\)](#) and identified a ‘knee’ in the PCS distributions of the heavy-tailed region.
- Optimized Nash and Lenhard’s 3 R scripts for PCS generation, quantile kurtosis analysis, and genomic regulatory blocks (GRBs), reducing time and memory complexity. Successfully reproduced PCS coordinates following UCSC format and fixed genome coordinate-related errors in R’s Bioconductor package.

#### ❖ Research Intern

May 2021

UiT - The Arctic University of Norway

Supervisors: [Prof. Aleksander Pedersen](#), [Prof. Rune Dalmo](#), [Ghada Bouzidi](#)

Internship Mentor: [Prof. Per Arne Sundsbø](#)






- Conducted comprehensive data and statistical analysis on the Narvik road dataset as part of the DIT4BEARs Smart Road project. [[Internship Report](#)] [[Project Source Code](#)] [[Certificate](#)]
- Designed, implemented, and evaluated ML models that successfully identified six road states, addressing the challenges of winter weather conditions in the Barren Euro-Arctic region.
- Proposed a novel safety metric and utilized Ridge, Lasso, Elastic Net, Linear Regression, and XGBRegressor to forecast its values.






## Publications

I have 118 citations according to Google Scholar as of June 8, 2025 (**h-index = 7, i10-index = 6**)













\* Denotes co-first authorship.

## Journal Articles


- [J-1] **Jahin, M. A.**, Shovon, M. S. H., Islam, M. S., Shin, J., Mridha, M. F., & Okuyama, Y. (2023). QAmplifyNet: Pushing the boundaries of supply chain backorder prediction using interpretable hybrid quantum-classical neural network. *Scientific Reports*, 13(1), 18246. 
- [J-2] **Jahin, M. A.**, & [Talapatra, S.](#) (2024). A Natural Language Processing-Based Classification and Mode-Based Ranking of Musculoskeletal Disorder Risk Factors. *Decision Analytics Journal*, 11, 100464. 
- [J-3] **Jahin, M. A.**, Shovon, M. S. H., Shin, J., Ridoy, I. A., & Mridha, M. F. (2024). Big Data - Supply Chain Management Framework for Forecasting: Data Preprocessing and Machine Learning Techniques. *Archives of Computational Methods in Engineering*, 31(6), 3619–3645. 
- [J-4] Ahmad, K. \*, Islam, M. S., **Jahin, M. A. \***, & Mridha, M. F. (2024). Analysis of Internet of things implementation barriers in the cold supply chain: An integrated ISM-MICMAC and DEMATEL approach. *PLoS ONE*, 19(7), e0304118. 
- [J-5] Saha, A. K. \*, **Jahin, M. A. \***, [Rafiquzzaman, M.](#), & Mridha, M. F. (2024). Ergonomic Design of Computer Laboratory Furniture: Mismatch Analysis Utilizing Anthropometric Data of University Students. *Heliyon*, 10(14). 

- [J-6] Shahriar, H. <sup>\*</sup>, Islam, M. S., **Jahin, M. A. <sup>\*</sup>**, Ridoy, I. A., Prottoy, R. R., Abid, A., & Mridha, M. F. (2024). Exploring Internet of Things Adoption Challenges in Manufacturing Firms: A Delphi Fuzzy Analytical Hierarchy Process Approach. *PLoS ONE*, 19(11), e0311643. 
- [J-7] **Jahin, M. A.**, Shovon, M. S. H., Mridha, M. F., Islam, M. R., & Watanobe, Y. (2024). A hybrid transformer and attention based recurrent neural network for robust and interpretable sentiment analysis of tweets. *Scientific Reports*, 14(1), 24882. 
- [J-8] **Jahin, M. A.**, Masud, M. A., Suva, M. W., Mridha, M. F., & Dey, N. (2025). Lorentz-Equivariant Quantum Graph Neural Network for High-Energy Physics. *IEEE Transactions on Artificial Intelligence*, 1–11. 
- [J-9] Morshed, A., Shihab, A. A., **Jahin, M. A. <sup>\*</sup>**, Nahian, M. J. A., Sarker, M. M. H., Wadud, M. S. I. <sup>\*</sup>, Uddin, M. I., Siraji, M. I., Anjum, N., Shristy, S. R., Rahman, T., Khatun, M., Dewan, M. R., Hossain, M., Sultana, R., Chakma, R., Emon, S. B., Islam, T., & **Hussain, M. A. <sup>\*</sup>** (2025). Ultrasound-Based AI for COVID-19 Detection: A Comprehensive Review of Public and Private Lung Ultrasound Datasets and Studies. *Multimedia Tools and Applications*. 
- [J-10] **Jahin, M. A. <sup>\*</sup>**, Shahriar, A. <sup>\*</sup>, & Amin, M. A. (2025). MCDNF: Supply Chain Demand Forecasting via an Explainable Multi-Channel Data Fusion Network Model. *Evolutionary Intelligence*, 18(66). 


### Under-Review Journal Articles

- [U-1] **Jahin, M. A.**, Naife, S. A., Saha, A. K., & Mridha, M. F. (2025). AI in Supply Chain Risk Assessment: A Systematic Literature Review and Bibliometric Analysis. Under review at *Heliyon*. 
- [U-2] **Jahin, M. A.**, Naife, S. A., Lima, F. T. J., Mridha, M. F., & Shin, J. (2025). Analyzing Male Domestic Violence through Exploratory Data Analysis and Explainable Machine Learning Insights. Under review at *Partner Abuse*. 
- [U-3] Rahman, M. M. <sup>\*</sup>, **Jahin, M. A. <sup>\*</sup>**, Islam, M. S., & Mridha, M. F. (2024). Optimizing Container Loading and Unloading through Dual-Cycling and Dockyard Rehandle Reduction Using a Hybrid Genetic Algorithm. Under review at *European Journal of Operational Research*. 
- [U-4] **Jahin, M. A.**, Mridha, M. F., Aung, Z., Dey, N., & **Sherratt, R. S.** (2024). TriQXNet: Forecasting Dst Index from Solar Wind Data Using an Interpretable Parallel Classical–Quantum Framework with Uncertainty Quantification. Under review at *npj Artificial Intelligence*. 
- [U-5] **Jahin, M. A.**, Masud, M. A., Mridha, M. F., Aung, Z., & Dey, N. (2024). KACQ-DCNN: Uncertainty-Aware Interpretable Kolmogorov-Arnold Classical-Quantum Dual-Channel Neural Network for Heart Disease Detection. Under review at *Computers in Biology and Medicine*. 
- [U-6] Uddin, M. K., Islam, M. S., **Jahin, M. A.**, Seam, M. S. I., & Mridha, M. F. (2025). Solving Generalized Grouping Problems in Cellular Manufacturing Systems Using a Network Flow Model. Under review at *OPSEARCH*. 
- [U-7] Uddin, M. K., Islam, M. S., **Jahin, M. A.**, Irfan, M. T. H., Seam, M. S. I., & Mridha, M. F. (2025). Designing Cellular Manufacturing System in Presence of Alternative Process Plans. Under review at *Production & Manufacturing Research*. 
- [U-8] Soudeep, S. <sup>\*</sup>, Mridha, M. F., **Jahin, M. A. <sup>\*</sup>**, & Dey, N. (2025). Interpretable Dynamic Graph Neural Networks for Small Object Detection and Tracking in Traffic Surveillance. Under review at *Communications in Transportation Research*. 
- [U-9] Islam, M. A., Mridha, M. F., **Jahin, M. A.**, & Dey, N. (2024). A Unified Framework for Evaluating the Effectiveness and Enhancing the Transparency of Explainable AI Methods in Real-world Applications. Under review at *Information Fusion*. 
- [U-10] **Jahin, M. A.**, Masud, M. A., Mridha, M. F., & Dey, N. (2025). Quantum Rationale-Aware Graph Contrastive Learning for Jet Discrimination. Under review at *NeurIPS 2025*. 
- [U-11] **Jahin, M. A.**, Mridha, M. F., & Dey, N. (2025). Human-in-the-Loop Feature Selection Using Interpretable Kolmogorov-Arnold Network-based Double Deep Q-Network. Under review at *IEEE Transactions on Automation Science and Engineering*. 
- [U-12] **Jahin, M. A. <sup>\*</sup>**, Soudeep, S. <sup>\*</sup>, Mridha, M. F., & Dey, N. (2025). Soybean Disease Detection via Interpretable Hybrid CNN-GNN: Integrating MobileNetV2 and GraphSAGE with Cross-Modal Attention. Under review at *IEEE Access*. 

### Conferences

- [C-1] Žifčáková, L., & **Jahin, M. A.** (2023, July 23-27). *Perfectly conserved sequences (PCS) between human and mouse are significantly enriched for small-protein coding sequence* [Poster presentation]. **Society for Molecular Biology and Evolution (SMBE)**, Ferrara, Emilia-Romagna, Italy. [\[Poster\]](#)
- [C-2] Žifčáková, L., **Jahin, M. A.**, & Miller, J. (2022, December 13-15). *Perfectly conserved sequences (PCS) between human and mouse are significantly enriched for exonic small proteins* [Poster presentation]. **Bioinformatics and Computational Biology Conference (BBCC)**, Virtual. [\[Poster\]](#)
- [C-3] **Jahin, M. A. <sup>\*</sup>**, Soudeep, S. <sup>\*</sup>, Mridha, M. F., Kabir, R., Islam, M. R., & Watanobe, Y. (2025, July 1-4). *CAGN-GAT Fusion: A Hybrid Contrastive Attentive Graph Neural Network for Network Intrusion Detection* [Conference session]. **38th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2025)**, Kitakyushu, Japan. 

## Research Internship Report

[R-1] **Jahin, M. A.**, & Kruttsylo, A. (2021). DIT4BEARs Smart Roads Internship (arXiv:2107.06755). arXiv. 

Grant/Funding	<b>Competitive Research Funding – AI</b>	
	[1] University of Aizu (Japan) (×2) for [J-1] & [U-3] – <i>Research Sponsor</i> : Prof. Jungpil Shin	2023 – 2024
	[2] Khalifa University (UAE) (×2) for [U-6] & [U-7] – <i>Research Sponsor</i> : Prof. Zeyar Aung	2024 – Present
	[3] OIST (Japan) (×1) for [U-5] – <i>Role</i> : Visiting Researcher	2024 – Present
	[4] University of Aizu (Japan) (×1) for [J-7] – <i>Research Sponsor</i> : Prof. Yutaka Watanobe	2024
Honors and Scholarships	<b>Champion – CS50x Puzzle Day – Harvard University – Meta</b>	2025
	Led a 4-person international team by fostering diversity & inclusion (Bangladesh, USA, India, and Pakistan) and solved advanced 9/9 puzzles (including Metapuzzle) [ <a href="#">Certificate</a> ]	
	<b>Student Researcher of the Year Award 2024 – KUET Research Society</b>	2024
	Published the highest number of high-impact research articles (Oct 2023 – Nov 2024) in KUET [ <a href="#">Award</a> ]	
	<b>MIT Solve – 2024 Global Health Equity Challenge</b>	2024
	Founded SpecX, an XAI-powered web app, for sentiment-driven disease profiling & specialist allocation [ <a href="#">Solution</a> ]	
	<b>Champion – CS50x Puzzle Day – Harvard University – Meta</b>	2024
	Led a 5-person international team by fostering diversity & inclusion (Bangladesh, USA, Morocco, and Pakistan) and solved advanced 9/9 puzzles (including Metapuzzle) [ <a href="#">Certificate</a> ]	
	<b>Dean’s Award (x3) – KUET</b>	2023
	Received 3 Dean’s awards in recognition of achieving annual GPAs $\geq 3.75$ out of 4.00 in three consecutive years of undergraduate classes [ <a href="#">Certificate</a> ]	
	<b>NASA Space Apps Challenge – Global Nominee</b>	2023
	Led a 5-person team and forecast geomagnetic storms using hybrid deep neural networks from satellite data – [ <a href="#">Project</a> ] [ <a href="#">30 seconds of glory video</a> ]	
	<b>Finalist – HONDA Y-E-S (Young Engineer and Scientist’s) Award 2022</b>	2023
	Awarded for being among the top 15 Bangladeshi young engineering undergrad student scientists [ <a href="#">Award &amp; certificate</a> ]	
	<b>Junior Research Fellowship – Bangladesh Space Research and Remote Sensing Organization</b>	2022
	Nominated as the junior-most research fellow by SPARRSO among the other excellent 55 undergraduate researchers for the project titled “Disaster Damage Mitigation by Multispectral Remote Sensing Satellite Image Data Analysis: A Deep Learning Approach” [ <a href="#">Project nomination</a> ] [ <a href="#">Presentation video</a> ]	
	<b>Qiskit Gold Level Translator – English to Bengali</b>	2021
	Translated 22101 and proofread 25375 words of IBM Qiskit’s first-ever textbook, collaborating with West Bengal and Bangladeshi Qiskit translator team of 36 members [ <a href="#">Certificate</a> ]	
	<b>Top 6 among 385 teams – Entrepren Season-2: Crafting Visions</b>	2021
	Developed a feasible and sustainable business canvas model for our Git and Jenkins integrated freelancing startup [ <a href="#">Case solution</a> ] [ <a href="#">Finalist</a> ]	
	<b>Top 500 – Google Android App Developer Challenge</b>	2021
	Engineered a countdown timer app on <i>Android Studio</i> with <i>Jetpack Compose Beta</i> using Kotlin language [ <a href="#">Source Code</a> ] [ <a href="#">Google swags</a> ]	
	<b>Global Champion – Smart Roads Hackathon</b>	2021
	Executed a 2-person team and devised an ML model to forecast winter road friction and was offered a 1-month research internship at <i>UiT - The Arctic University of Norway</i> [ <a href="#">Project Page</a> ]	
	<b>Winner – ISCEA Ptak Prize Global SCM Case Competition</b>	2020
	Led a 4-person team and achieved 70% scholarship for completing the course for the professional certification titled <i>Certified Supply Chain Analyst (CSCA)</i> [ <a href="#">Case solution</a> ] [ <a href="#">Certificate</a> ]	
	<b>Champion – CS50x Puzzle Day (Fall) – Harvard University</b>	2020
	Spearheaded a 4-person international team (Bangladesh, UK, Pakistan, and Mexico) and solved advanced 8/8 puzzles [ <a href="#">Certificate</a> ]	
	<b>Gold Honor – Ranked top 3% – IAAC</b>	2020
	<i>International Astronomy &amp; Astrophysics Competition</i> [ <a href="#">Solution</a> ][ <a href="#">Final round certificate</a> ]	
	<b>Champion – CS50x Puzzle Day (Spring) – Harvard University</b>	2020
	Led a 3-person international team by fostering diversity & inclusion (Bangladesh, Brazil, and India) and solved advanced 8/8 puzzles [ <a href="#">Certificate</a> ]	
	<b>International Asteroid Search Collaboration – NASA</b>	2020
	Administered a 4-person team and discovered 2 main belt asteroids by analyzing Pan-STARRS images using <i>Astrometrica</i> software [ <a href="#">Certificate</a> ]	
	<b>Gold Honor – Ranked top 5% – IYMC</b>	2019
	<i>International Youth Math Challenge</i> [ <a href="#">Solution</a> ][ <a href="#">Final round certificate</a> ]	
	<b>Government Board Merit-based Scholarship (x4)</b>	2010 – 2018
	<a href="#">PSC</a> (2010; 17th in Rajshahi Board; awarded for 2 years), <a href="#">JSC</a> (2013; awarded for 2 years), <a href="#">SSC</a> (2016; awarded for 2 years), <a href="#">HSC</a> (2018; awarded throughout 4-year B.Sc.) Govt. Board Exams	



<b>Teaching Experience</b>	<b>Intro to Programming with Python</b> Jan 2022 <i>Mini-Course Teacher, OIST, Japan</i> ♦ Topics covered: Intro, Anaconda, variables, lists, strings, control structures [ <a href="#">Course materials &amp; details</a> ] ♦ Fellow Teachers: Dr. Nicholas Wardhana and Dr. Jeremie Gillet
<b>Tutorials</b>	<b>Operations Research</b> Jan 2023 - Developed and presented the first-ever comprehensive Bengali online tutorials on Operations Research topics, facilitating 3rd-year IPE students. - Topics covered: Simplex Method, Two-Phase, Big M, Graphical Sensitivity Analysis, TORA. [ <a href="#">YouTube Playlist</a> ] - Reference book: “Operations Research – An Introduction” by Professor Hamdy A. Taha.
<b>Leadership &amp; Advisory Roles</b>	<b>KUET Research Society</b> Oct 2023 – May 2024 <i>Co-founder &amp; President</i> • Served as an Executive Committee Member and President of the Industrial Engineering and Management Unit • Supervising (as an alumnus) 6 groups of research students concentrating on ML-DL and computational fuzzy logic, fostering cross-departmental research collaboration • Teaching (as an alumnus) scientific research methodology, research ethics, and journal article formatting, meeting publication criteria, and acquiring funding for publications
<b>Professional Service</b>	<b>Peer Reviewer</b> Jul 2023 – Present Reviewed for 1 conference, 3 workshops, and 13 journals verified by Web of Science as of June 8, 2025 [ <a href="#">WoS Re-searcherID</a> ] □ ICML 2025 Workshop LXAI (4) □ ICML 2025 Workshop AIW (3) □ ICML 2025 Workshop DataWorld (3) □ IEEE Transactions on Systems, Man and Cybernetics: Systems (1) □ Scientific Reports (Nature Portfolio) (1) □ ACM Transactions on Intelligent Systems and Technology (1) □ Expert Systems with Applications (Elsevier) (1) □ IEEE Access (5) □ Neural Networks (Elsevier) (1) □ Computers & Industrial Engineering (Elsevier) (1) □ Multimedia Tools and Applications (Springer Nature) (2) □ Engineering Applications of Artificial Intelligence (Elsevier) (2) □ The Journal of Supercomputing (Springer Nature) (1) □ Cluster Computing (Springer Nature) (1) □ Journal of Contemporary African Studies (Taylor & Francis) (1) □ Journal of Multidisciplinary Healthcare (Taylor & Francis) (1) □ 7th European Conference on Industrial Engineering and Operations Management (Augsburg, Germany, July 2024) (5)
<b>Skills</b>	<b>Programming</b> <i>Advanced and Proficient in:</i> Python, C/C++, R, SQL, SAS, Data Structure and Algorithm, Object Oriented Programming <i>Familiar with:</i> Kotlin <b>Machine Learning:</b> Classical Deep Learning, Quantum Machine Learning (Qiskit, PennyLane, TorchQuantum), XAI, NLP, DASK: Parallel Computing, Tensorflow, Keras, PyTorch, IBM Watson <b>Data Analysis and Optimization:</b> Microsoft Excel, IBM SPSS, Minitab, TORA, Gurobi, Beautiful Soup, Biopython, Bioconductor, NetworkX, OpenCV <b>High-Performance Scientific Computing:</b> Deigo & Saion Cluster (OIST) <b>Operating System:</b> Linux, Unix, Windows <b>Version Control:</b> Git Bash, Github, GitLab <b>Product Design:</b> AutoCAD 2021, SolidWorks 2022, Unity 2D <b>Referencing Software:</b> Zotero, Mendeley <b>Reviewing &amp; Bibliometric Analysis:</b> Publish or Perish 8.0, Gephi, VOSviewer <b>Writing tools:</b> L <sup>A</sup> T <sub>E</sub> X, Microsoft Word <b>Languages:</b> Bengali (Native), Hindi, English (IELTS Overall Score: 7.0, R: 7.5, W: 7.0, L: 6.5, S: 6.5)
<b>Certifications</b>	MITx: <a href="#">CTL.SC4x: Supply Chain Technology and Systems</a> (Grade: 75%) MITx: <a href="#">6.431x: Probability - The Science of Uncertainty and Data</a> (Grade: 91%) MITx: <a href="#">CTL.SC0x: Supply Chain Analytics</a> (Grade: 83%) MITx: <a href="#">2.961.2x: Management in Engineering: Strategy and Leadership</a> (Grade: 77%) HarvardX: <a href="#">PH125.1x: Data Science: R Basics</a> (Grade: 83%) Delftx: <a href="#">UnixTx: Unix Tools: Data, Software and Production Engineering</a>

TAUx, IsraelX: [Unlocking Information Security: Part 1](#)  
ISCEA: [Certified Supply Chain Analyst](#) (Grade: 88%)  
Google: [IT Technical Support Fundamentals](#)  
Google: [Crash Course on Python](#)  
Google: [The Bits and Bytes of Computer Networking](#)  
UCSanDiegoX: [DSE200x: Python for Data Science](#) (Grade: 89%)  
Georgia Tech: [Speak English Professionally: In Person, Online & On the Phone](#)  
IBM: [AI Chatbots without Programming](#)  
IBM: [PY0101EN: Python 101 for Data Science](#)  
Microsoft: [Introduction to Artificial Intelligence \(AI\)](#)