Md Abul Kalam Azad
PhD Candidate

(313) 231-5894
Westland, Michigan
akazad@umich.edu

Google Scholar
github.com/mak-azad
linkedin.com/in/mak-azad

EDUCATION

Ph.D. in Computer and Information Science, *University of Michigan - Dearborn*   **Fall 2021 — Winter 2026 (expected)**
Research area: Computing systems and software engineering, with a focus on software performance   **Advisor:** Probir Roy
Master of Science in Computer and Information Science, *University of Michigan - Dearborn*   **Winter 2024**
CGPA: 4.00/4.00
Master of Science in Computer Science and Engineering, *University of Rajshahi, Bangladesh*   **August 2012**
CGPA: 3.91/4.00
Thesis: Guiding-line Extraction from Real Photo for Painterly Rendering.
Bachelor of Science in Computer Science and Engineering, *University of Rajshahi, Bangladesh*   **March 2011**
CGPA: 3.80/4.00.

PUBLICATIONS

- **Azad, M. A. K.**, Alexender, M., Hasan, F., and Roy, P, "PcMINER: Mining Performance Bug Related Commits at Scale", *Empirical Software Engineering (EMSE) Journal "* [**Journal Rank:** $Q1$**, (Submitted)**]
- **Azad, M. A. K.**, Alexender, M., Hasan, F., and Roy, P, "PcMINER: Mining Performance Related Commits at Scale", *Super-computing Conference (SC) 2024, Atlanta, GA, USA, 2024* (Poster) [**CoreRank:** A^***, Acceptance Rate:** 20%]
- **Azad, M. A. K.**, Iqbal, N., Hasan, F., and Roy, P., "An Empirical Study of HPC Performance Bugs ," *The IEEE/ACM International Conference on Mining Software Repositories, Melbourne, Australia, 2023* [**CoreRank:** A, **Acceptance Rate:** 27%]
- Pramanik, M. I., Lau, R. Y., Demirkan, H., **Azad, M. A. K.**, Hossain, M. S., Chowdhury M.K.H.,Karmaker, B.K, "Healthcare informatics and analytics in big data," *Expert Systems with Applications* Volume 152, (2020): 113388, ISSN 0957-4174, [**Journal Rank:** $Q1$]
- Pramanik, M. I., Lau, R. Y., Demirkan, H., and **Azad, M. A. K.**, "Smart health: Big data enabled health paradigm within smart cities," *Expert Systems with Applications* 87 (2017): 370-383 (Elsevier/ESWA) [**Journal Rank:** $Q1$]
- Alam, M. H. , Rahoman, M. M. and **Azad, M. A. K.**, "Sentiment Analysis for Bengali Sentences using Convolutional Neural Network", *20th International Conference on Computer and Information Technology (ICCIT 2017))* [**Acceptance Rate:** 30%]
- **Azad, M. A. K.**, Xie, N. and Ahmad, S., and and Nakajima, M., "Bangladeshi Facial Artistic Stylization", *13th Annual International Conference "NICOGRAPH International 2014"* (poster) **Acceptance Rate:** 27%]
- **Azad, M. A. K.**, Xie, N. and Ahmad, S. , "Bangladeshi style: A way of facial artistic stylization in visual effects", *16th International Conference on Computer and Information Technology (ICCIT 2013)* [**Acceptance rate:** 30%]

AWARDS & HONORS

- NSF Travel Award for attending MAPS-2023, co-located at ESEC/FSE 2023, San Francisco, California   **December 2023**
- NSF Travel Award ($3367) for attending and presenting a paper at ICSE 2023, Melbourne, Australia   **May 2023**
- ACM SIGSOFT and U of Michigan Exp+ Conference Award ($2500) for MSR 2023, Melbourne, Australia   **May 2023**
- Received recognition for outstanding contribution to teaching, research, service to the Univerity of Michigan-Dearborn   **2021 — 2022**
- **Divisional Champion** at the ACM International Collegiate Programming Contest, Asia Regional, Dhaka site   **May 2010**
- **9th rank** at the National Collegiate Programming Contest, BUET, Bangladesh   **May 2008**
- Undergrad Merit Scholarship for excellent academic records and media coverage for a project   **2007 — 2010**

CONFERENCE & WORKSHOP ATTENDED

- The 7th Annual Symposium on Machine Programming-2023, co-located at ESEC/FSE 2023, San Francisco   **December 2023**
- Attended and Presented paper at ICSE 2023 and 20th IEEE/ACM International Conference on Mining Software Repositories (MSR), Melbourne, Australia   **May 2023**
- The 37th IEEE/ACM International Conference on Automated Software Engineering, *Rochester, Michigan*   **Oct 2022**
- The 28th IEEE International Symposium on High-Performance Computer Architecture (PPoPP/CGO/HPCA/CC), *Virtual*   **Apr 2022**

TECHNICAL SKILLS

Programming Languages	C/C++, Python, and Java
Software Tools & Library	VSCode, PyTorch, vLLM, Huggingface, LangChain, HPCToolkit, OpenMP, Kubernetes, Apache Hadoop
Problem Solving	Deep Learning (focus: LLM), Algorithms and Data Structure, ACM Problem Solving*
Communication	English (Full professional proficiency), Bengali (Native proficiency)

Research Experience

Graduate Research Assistant **Fall 2021 — Present**
SRLab, University of Michigan - Dearborn

- Conducting research and assisting PI in NSF Funded projects.
- Developing and implementing tools and techniques for exposing software performance bottlenecks and optimization opportunities in software systems such as HPC applications, cloud applications, and IoT applications, and more.
- Investigating and evaluating LLM for detecting software performance bugs and providing efficient code recommendations.
- Published research papers and reusable artifacts in top-tier conferences.

Big data health informatics **Apr 2017 — Mar 2020**
The City University of Hong Kong

- Collaborated with a researcher at The City University of Hong Kong in the project titled "Smart health: Big data enabled health paradigm within smart cities." and "Healthcare informatics and analytics in big data"
- Published two referred journals.

Guiding-line Extraction from Real Photo for Painterly Rendering **Apr 2012 — May 2013**
Image Processing Lab, Dept. of Computer Sci. & Engg., University of Rajshahi

- Conducted independent MS thesis to develop image processing techniques for extracting guiding lines from real-world photos.
- Published one conference paper and one conference poster.

Teaching and Mentoring

Graduate Teaching Assistant **Sep 2022 — Present**
Department of Computer and Information Science, University of Michigan - Dearborn

- Courses: CIS 150L, CIS 250L, CIS 310, CIS 450
- Teaching programming lab classes for undergraduate students.
- Grade homework, lab reports, and maintain office hours.

Lecturer **Mar 2014 — May 2021**
Department of Computer Science and Engineering, Begum Rokeya University

- Teaching undergraduate major courses on Programming Language in C/C++, Data Structure, Algorithm Design and Analysis, Parallel Programming.
- Coaching students for ACM ICPC programming contests.

Professional Membership

- Association for Computing Machinery (ACM) Member, *ID:5581827*