

Mohammad Imran Chowdhury, Ph.D.

Associate Professor of Instruction

Department of Computer Science | The University of Texas at San Antonio, TX, USA

URL: <http://www.cs.utsa.edu/~mchowdhury/>

PROFESSIONAL SUMMARY

Dedicated Associate Professor of Instruction in Computer Science with a strong background in teaching, academic mentorship, and advanced research. Specialized in algorithm design & analysis, autonomous vehicle path planning, and robotics. Proven track record of delivering high-quality education across graduate and undergraduate levels, including design & analysis of algorithms, machine learning, data mining, and artificial intelligence. Recognized with faculty appraisal merit awards for excellence in instructional delivery and academic service.

EDUCATION

- Doctor of Philosophy (Ph.D.) in Computer Science — Florida State University (FSU), USA | July 30, 2022
- MS / Thesis in Computer Science — Florida State University (FSU), USA | August 4, 2018 (CGPA: 3.78/4.00)
- B.Sc. (Engg.) in Computer Science and Engineering — Chittagong University of Engineering and Technology (CUET), Bangladesh | November 2012 (Rank: 1st among 60 students in CSE Department, CGPA: 3.74/4.00)

ACADEMIC AWARDS & CERTIFICATES

- UTSA Annual Faculty Performance Appraisal Merit Award for the AY 22-23, and AY 23-24.
- Upsilon Pi Epsilon Certificate Award from Honor Society for the Computing and Information Disciplines | November 28, 2017.
- Departmental appointment as Teaching Assistant (TA) from Fall 2016 to Summer 2022.
- CUET Ex-Students Association Merit Award.

RESEARCH INTERESTS

- UAV Path Planning Algorithms | Machine Learning & Robotics
- Design & Analysis of Algorithms | Compilers: Efficient RegEx Matching

EXPERIENCES

Associate Professor of Instruction

The University of Texas at San Antonio | September 2026 – Present

Instructional Domains & Core Courses Taught (Graduate & Undergraduate levels):

- Data Science & AI: Machine Learning (Graduate/Undergraduate), Data Mining (Graduate/Undergraduate), Data Science (Graduate/Undergraduate).
- Theoretical Computer Science: Design and Analysis of Algorithms (Undergraduate).

- Systems & Architecture: Operating Systems (Graduate/Undergraduate), Fundamentals of Systems (Graduate/Undergraduate).

Assistant Professor of Instruction

The University of Texas at San Antonio | August 2022 – August 2026

Core Courses Taught (Graduate & Undergraduate levels):

- CS 6243 Machine Learning (GRAD) — Fall 2024
- CS 4253 Machine Learning (UGRAD) — Fall 2025
- CS 3343 Analysis of Algorithms — Spring 2024, Spring 2025
- CS 3753 Data Science (UGRAD) — Fall 2023, 2024, Spring 2024
- CS 5163 Data Science (GRAD) — Spring 2023, Spring 2025
- CS 4373 Data Mining (UGRAD) — Fall 2022, 2023, 2024, 2025
- CS 5473 Data Mining (GRAD) — Fall 2022, 2023, 2024, 2025
- CS 3733 Operating Systems — Fall 2022–2025, Spring 2023, 2024, 2025
- CS 4023 / CS 5023 Fundamentals of Systems — Fall 2022, 2023, Spring 2023

Graduate Teaching Assistant

Florida State University | August 2016 – August 2022

Instructional Domains & Core Courses Taught (Undergraduate levels):

- Programming & Software Engineering: Web Programming and Design, Object Oriented Programming in C++, Java Programming for Non-Majors, Introduction to UNIX

Teaching Services & Duties

- Preparing lecture materials and conducting classes at undergraduate and graduate levels.
- Preparing, administering, and conducting department examinations.
- Grading examinations, term papers, and laboratory reports.
- Conducting seminars, discussion groups, and lab tutorials.
- Working as a member to conduct extracurricular activities.
- Advising students regarding academic performance and career management.
- Advising students on research activities, manuscript preparation, and seminar presentations.
- Organizing programs and extracurricular activities on various national days.

RESEARCH PUBLICATIONS & PROJECTS

- M.I. Chowdhury, "Path Planning Algorithms For Autonomous Vehicles", 2022. (Ph.D. Dissertation) [https://purl.lib.fsu.edu/diginole/2022_Summer_Chowdhury_fsu_0071E_17307]
- M.I. Chowdhury and D.G. Schwartz, "USV Obstacle Avoidance Using A Novel Local Path Planner and Novel Global Path Planner With r-PRM", in The 54th International Symposium on Robotics, ISR Europe 2022, Munich, Germany, June 20-21, 2022, IEEE. (CORE Rank A)
- M.I. Chowdhury and D.G. Schwartz, "Recursion-Based Probabilistic RoadMap for Robot Path Planning", in The 54th International Symposium on Robotics, ISR Europe 2022, Munich, Germany, June 20-21, 2022, IEEE. (CORE Rank A)

- M.I. Chowdhury and D.G. Schwartz, "UUV On-Board Path Replanning using PRM-A*", Oceans 2020, MTS/IEEE, October 19-22, 2020, Biloxi, Mississippi, 8 pages.
- M.I. Chowdhury and D.G. Schwartz, "The PRM-A* Path Planning Algorithm For UUVs: An Application To Navy Mission Planning", Oceans 2020, MTS/IEEE, October 19-22, 2020, Biloxi, Mississippi, 9 pages.
- M.I. Chowdhury. "stadfa: An Efficient Subexpression Matching Method", 2018. (MS Thesis) [http://purl.flvc.org/fsu/fd/2018_Su_Chowdhury_fsu_0071N_14793]
- M.I. Chowdhury, Asaduzzaman and Mir Md Saki Kowsar, "An Energy Efficient and Cooperative Congestion Control Protocol in MANET", International Journal of Computer Applications 975 (2012): 8887.
- Project: [jEdit-03] Retain string used for replace in the "Find and Replace" dialog box
- Project: [jEdit-470] Allow Wildcards in Directory Paths for Find/Replace
- Project: [FEMR-158] Don't require the user's password when an administrator tries to edit that user
- Project: [FEMR-151] User will be stopped from being able to enter the conflicting age information at front end
- Project: Developed a simplified version of UNIX Shell Program
- Project: Developed a Messenger Application Program (like Facebook Messenger)

TECHNICAL SKILLS

- **Platform:** Windows, Linux, MacOS
- **Programming Languages:** Python, Java, C, C++, C#, J2SE, Android, Haskell, R
- **Scripting Languages:** HTML, CSS, Javascript, PHP, AJAX, JQuery, Sh
- **Software & Tools:** Jupyter Notebook, Spyder, Google Colab, PyCharm, Netbeans, Eclipse, MATLAB, GIT, Power BI, Tableau
- **Databases:** MySQL, PostgreSQL, Oracle, Microsoft SQL Server

EXTRACURRICULAR & LEADERSHIP

- Participated in several UTSA community service projects, including serving as a faculty reviewer at the ACM Resume Review Workshop and Mock Interview Workshop, and volunteering at UTSA Roadrunner Day.
- Served as a faculty member on the CS UTSA Student Success Committee.
- Arranged several IUPC contests, including CUET ICT Fete NCPC 2010 (60+ teams).
- Participated in several programming contests and debating competitions.