

BIOGRAPHICAL SKETCH

Dr. Mohammad Imran Chowdhury is an Assistant Professor of Instruction in the [Department of Computer Science](#) at [The University of Texas at San Antonio, TX, USA](#). His research is in algorithms and robotics, focusing on analyzing and designing novel path planning algorithms for Autonomous Vehicles (AVs). He received his Ph.D. in 2022 and M.Sc. in 2018 from [Florida State University](#) in Tallahassee, FL, under the supervision of [Dr. Daniel Schwartz](#) and [Dr. Robert van Engelen](#). He completed his B.Sc. in 2012 at the [Chittagong University of Engineering & Technology \(CUET\) in Chittagong, Bangladesh](#).

EDUCATION

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

ACADEMIC AWARDS & CERTIFICATES

- Upsilon Pi Epsilon Certificate AWARD from Honor Society for the Computing and Information Disciplines on November 28th, 2017.
- Departmental appointment as Teaching Assistant (TA) from Fall'2016 to Summer'2022.
- CUET Ex-Students Association MERIT AWARD for earning highest CGPA in 3rd year, and 4th year.

RESEARCH INTEREST

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| <ul style="list-style-type: none">■ UAV Path Planning Algorithms and Robotics■ Embedded Systems, Autonomous System■ Artificial Intelligence: Machine Learning■ Algorithm Analysis & Design■ Program Analysis & Synthesis Method■ Compilers: Efficient RegEx Matching■ Operations Research, DevOps Foundations■ Agile Software Development | <ul style="list-style-type: none">■ Building Deep Learning Applications with Keras, and TensorFlow■ Big Data Analytics with Hadoop and Apache Spark■ Python for Data Science, and Data Analysis■ Building Deep Learning Applications: PyTorch■ SAS Programming: SASPy, and SAS pipefitter■ Python: Unit Testing and Test-Driven Development■ Network security, computer networks, and power-laws of Internet topology. |
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RESEARCH PUBLICATIONS & PROJECTS

- M.I. Chowdhury, "Path Planning Algorithms For Autonomous Vehicles", 2022.
https://purl.lib.fsu.edu/diginole/2022_Summer_Chowdhury_fsu_0071E_17307. (Ph.D. Dissertation)

- 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.
http://purl.flvc.org/fsu/fd/2018_Su_Chowdhury_fsu_0071N_14793. (MS Thesis)
- 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.
- [jEdit-470] Allow Wildcards in Directory Paths for Find/Replace
- [FEMR-158] Don't require the user's password when an administrator tries to edit that user
- [FEMR-151] User will be stopped from being able to enter the conflicting age information at front end
- Develop a simplified version of UNIX Shell Program
- A Messenger Application Program such as Facebook Messenger

EXPERIENCES

- **Assistant Professor of Instruction at UTSA** **August'2022 to Present**
 - CS 6243 Machine Learning (GRAD) Fall'2024
 - CS 3343 Analysis of Algorithms Spring'2024, Spring'2025
 - CS 3753 Data Science (UGRAD) Fall'2023, Fall'2024, Spring'2024
 - CS 5163 Data Science (GRAD) Spring'2023, Spring'2025
 - CS 4373 Data Mining (UGRAD) Fall'2022, Fall'2023, Fall'2024
 - CS 5473 Data Mining (GRAD) Fall'2022, Fall'2023, Fall'2024
 - CS 3733 Operating Systems Fall'2022, Spring'2023, Spring'24'25
 - CS 4023/ CS 5023 Fundamentals of Systems Fall'2022, Spring'2023, Fall' 2023
- **Graduate Teaching Assistant at Florida State University** **Aug'2016 to Aug'2022**
 - CGS3066 Web Programming and Design Summer'2022
 - CGS3066 Web Programming and Design Spring'2022
 - CGS3406 Object Oriented Programming in C++ Spring'2022
 - CGS3066 Web Programming and Design Fall'2021
 - CGS3416 Java Programming for Non-Majors Fall'2021
 - COP3353 Introduction to UNIX Summer'2021
 - CGS3416 Java Programming for Non-Majors Spring'2021
 - CAP5605 Artificial Intelligence Fall'2020
 - CEN4020 Software Engineering I Summer'2020
 - CAP5605 Artificial Intelligence Spring'2020
 - COT5507 Analytic Methods in Computer Science Spring'2020
 - CGS2100 Microcomputer Applications for Business/Economics Fall'2019
 - CIS4930 Python Programming Summer'2019
 - COT5310 Theory of Automata and Formal Languages Spring'2019
 - COP5570 Concurrent, Parallel, and Distributed Programming Fall'2018

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| ○ COT5507 Analytic Methods in Computer Science | Fall'2018 |
| ○ CGS2100 Microcomputer Applications for Business/Economics | Summer'2018 |
| ○ COP4342 Unix Tools | Spring 2018 |
| ○ CGS2100 Microcomputer Applications for Business/Economics | Fall'16 to Fall'17 |

- **Teaching Services/duties**
 - ▢ Preparing lecture materials and giving classes at undergraduate and graduate level
 - ▢ Preparing, administering and conducting department examinations
 - ▢ Grading the 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 and career management.
 - ▢ Advising students on research activities, articles writing and preparing seminars, symposiums and forums.
 - ▢ Conducting programs and extracurricular activities on various national days.

TECHNICAL SKILLS

Platform :: Windows, Linux
 Programming Language :: C, C++, C#, Java, J2SE, Android, Haskell, R, Python, SAS
 Scripting Language :: HTML, CSS, Javascript, PHP, AJAX, JQuery, Sh
 Software/Tools :: JIRA, Netbeans, Eclipse, MATLAB, GIT, Power BI, Tableau, PyCharm, Spyder
 Database :: SQL Server, Oracle, MySQL, PostgreSQL

EXTRACURRICULAR & LEADERSHIP

- Participated in several programming contest
- Arranged several IUPC contests including CUET ICT Fete NCPC 2010 (60+ teams)
- Participated in several debating competition