Faiyaz A. Chowdhury

Portfolio: faiyazchowdhury.github.io • Atlanta, GA 30309 • (404) 993-8179 • faiyaz.chowdhury0@gmail.com
EAD/OPT Authorized • **Full-Time** • **Motion Control & Software Engineering** • Graduated • Willing to Relocate

OBJECTIVE

Electrical and Computer Engineering M.S. Georgia Tech graduate seeking Motion Control or Software Engineering position.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA *GPA 3.7*
Master of Science in Electrical and Computer Engineering, Controls Specialization *August 2018 – Dec 2019*
Bachelor of Science in Electrical Engineering, Robotics Minor *August 2014 – May 2018*

SKILLS

Coding: MATLAB, C++ (CUDA), Java, Python (ROS), Dart (Flutter), Assembly, VHDL, CSS, HTML, VBA, R
Courses: Controls (Adaptive, Nonlinear, Digital, State-Space, PID), Robotics, Computer Vision, DSA, AI, Dynamics, DSP

EXPERIENCE

LETZCHILL – *Founder, App Developer* *June 2020 – September 2020*
- Developed an Android and iOS app that enables friends to meet without any prior planning after viewing days of isolation
- Structured database, cloud functions, and security rules to secure user privacy and minimize writes to reduce cost
- Improved user experience by implementing contacts, location and notification features and server-side cloud functions

BIOMEDICAL, DIGIAL & ANALOG ELECTRONICS – *Teaching Assistant* *May 2016 – December 2019*
- Taught analog and C++ embedded design concepts to class involving design and creation of biomedical devices
- Debugged digital and analog circuits using oscilloscopes and logic analyzers and explained related circuit concepts
- Oversaw class involving programming DE2 FPGA in VHDL, SPICE and assembly for localization tasks with AmigoBot

GEORGIA TECH INFORMATION TECHNOLOGY – *Web Developer* *May 2019 – August 2019*
- Identified and presented valuable actionable insights to clients using data acquired from Google Analytics
- Increased Exit % and reduced Pages per View by editing and testing websites using HTML, CSS, and Drupal

PROJECTS Atlanta, GA

HELICOPTER ADAPTIVE CONTROL *January 2019 – May 2019*
- Simulated helicopter set-point trajectory control using Model Reference Adaptive Control in nonlinear MIMO system
- Optimized gains of feedback controller using LQR and adapted these gains using CARE to match plant behavior to model
- Achieved full position controllability with differential flatness and eliminated nonlinear behavior with backstepping

PAC-MAN VIDEOGAME *January 2017 – May 2018*
- Implemented searching algorithms, reinforcement learning and particle filters in Python to win game in a stochastic system
- Assembled a Pac-Man themed game console with an Mbed kit, with gaming mechanics developed in C++

BIPEDAL WALKING ROBOT *August 2016 – December 2016*
- Built and enabled a bipedal robot to walk with OpenCM microcontroller using MATLAB dynamixel interface and servos
- Implemented forward kinematics to track the robot feet orientation with respect to the robot waist
- Implemented path planning using resolved-rate control and Optragen to generate trajectory that minimizes energy cost

COMPUTER VISION PROJECTS *January 2017 – May 2019*
- Reduced computation time of 2D-DFT from 289 seconds to 3 seconds in C++ CUDA using cache memory inside a GPU
- Implemented object recognition in MATLAB to reach 90% accuracy deciding between faces and cars using feature spaces
- Programmed a TurtleBot in Python ROS to autonomously navigate its surroundings without collision with an Xbox Kinect

LEADERSHIP ROLES Atlanta, GA

UNICYCLING CLUB GEORGIA TECH – *President* *January 2016 – September 2019*
ETA KAPPA NU, BETA MU CHAPTER – *Picnic Chair, Initiation Chair* *January 2019 – December 2019*