

Faiyaz A. Chowdhury

Portfolio: [faiyazchowdhury.github.io](https://github.com/faiyazchowdhury) • Atlanta, GA 30308 • (404) 993-8179 • faiyaz.chowdhury0@gmail.com
EAD/OPT Authorized • Full-Time • Software Engineering • Recent Graduate • Willing to Relocate

EDUCATION

UDACITY NANODEGREE: Self-Driving Car Engineer

Dec 2020 – Present

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA

August 2014 – Dec 2019

Master of Science in Electrical and Computer Engineering, Controls Specialization

GPA 3.66

Bachelor of Science in Electrical Engineering, Robotics Minor

GPA 3.71

SKILLS

Programming: C++ (CUDA), MATLAB, Java, Python (ROS), Dart (Flutter), Javascript, C, Assembly, VHDL, HTML, CSS

Courses: State-Space Control, PID Control, Digital Control, Robotics, Computer Vision, DSA, AI, Dynamics, DSP

EXPERIENCE

LETZCHILL – Founder, Developer

September 2020 – Present

- Restructured database of iOS and Android Flutter App using Javascript in Google Cloud Functions to reduce cost by 40%

GEORGIA TECH SCHOOL OF ECE – Graduate & Undergraduate Teaching Assistant

May 2016 – December 2019

- Taught analog and C++ embedded design concepts in study sessions for toughest exam increasing class average by 11%
- Created circuit debugging guide enabling students to efficiently debug circuits themselves when TAs are understaffed

GEORGIA TECH INFORMATION TECHNOLOGY – Web Developer

May 2019 – August 2019

- Identified issues using Google Analytics and implemented changes using HTML and CSS, increasing Exit Percent by 36%

MITSUBISHI HITACHI POWER SYSTEMS SOUTH AFRICA – Developer

May 2017 – August 2017

- Developed UI in Visual Basic used during executive meetings to avoid going overtime, reducing meeting duration by 17%

PROJECTS

PAC-MAN GAME WITH ARTIFICIAL INTELLIGENCE

January 2017 – May 2018

- Assembled a Pac-Man themed game on Mbed microcontroller, with gaming mechanics developed in C++
- Implemented searching algorithms, reinforcement learning and particle filters in Python to win game in a stochastic system

HELICOPTER ADAPTIVE CONTROL

January 2019 – May 2019

- Simulated unknown helicopter set-point trajectory control in MATLAB using MRAC 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

BIPEDAL ROBOT PATH PLANNING

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 GPU cache memory
- 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

HIGHVIEW TECHNOLOGIES – Startup Chief Marketing Officer (CMO)

May 2019 – September 2019

- Performed market research and pitched startup to 700 investors in Create-X's Demo Day, receiving product-market-fit prize

UNICYCLING CLUB GEORGIA TECH – President

January 2016 – September 2019

- Taught unicycling and set up weekly meetings, SGA budget, trips and club merchandise, quadrupling membership

ETA KAPPA NU, BETA MU CHAPTER – Picnic Chair

January 2019 – December 2019

- Avoided unnecessary recurring cost of annual ECE Spring Picnic saving \$475 off the annual picnic budget