Faiyaz A. Chowdhury

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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 MODEL REFERENCE 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 LIMB 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