

Michael Koger Darden
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EDUCATION

Bachelor of Science, Electrical and Computer, August 2018

The University of Texas at Austin

GPA: 3.76/4.00

Related Courses

Embedded Systems, Software Design and Implementation (I & II), Circuit Theory, Linear Systems & Signals, Algorithms, Probability, Electromagnetic Engineering, Real-Time Digital Signal Processing, Digital Image & Video Processing, Principles of Data Science, Data Science Lab, Honors Senior Design, Automatic Control

WORK EXPERIENCE

Student Technician, UT LAITS 06/18 – 08/18

- Performed daily morning checks of classroom technical equipment
- Handled customer support calls and helped resolve technical issues

Student Technician, UT Applied Research Laboratories 06/16 – 08/16

- Setup *GitLab Continuous Integration (CI)*
- Wrote scripts in *Bash* to facilitate CI testing

ACADEMIC EXPERIENCE

Honors Senior Design Project, The University of Texas at Austin 11/17 – 05/18

- Developed an automated team-formation web application for UT faculty
- Developed multiple algorithm implementations, cut runtime down by 10x
- Documented all steps of the design, research, and implementation process

Software Engineering and Design Lab, The University of Texas at Austin 01/18 – 05/18

- Created a cocktail recipe webapp using *Flask*
- Created a timezone-exchange *Android* app using Google *geocoding* and *timezone APIs*
- Created an online blog site using *Java* and *Google App Engine*

Data Science Lab, The University of Texas at Austin 01/18 – 05/18

- Attempted to generate new Pokémon with a *convolutional GAN*, used *Tensorflow* and *Microsoft Azure*
- Used machine learning in mock *Kaggle* competition

Digital Image Processing Project, The University of Texas at Austin 11/17 – 12/17

- Implemented motion tracking on stationary videos to extract objects of interest
- Worked with *MATLAB* image processing and computer vision libraries

Principles of Data Science Project, The University of Texas at Austin 10/17 – 12/17

- Predicted outcomes of baseball games using player statistics
- Worked with *Ensembles*, *XGBoost*, and other models from *scikit-learn*
- Achieved an average accuracy higher than home-team baseline

Real-Time DSP Lab, The University of Texas at Austin 01/17 – 05/17

- Designed and implemented digital FIR and IIR filters
- Simulated software-defined radio and Implemented PAM transceivers
- Worked with signal generators, oscilloscopes, *MATLAB*, and *TI Code Composer Studio*

Software Design Project, The University of Texas at Austin 06/16 – 08/16

- Created a graphical critter simulator using *Java*

- Learned how to use java Reflection and *JavaFX* libraries as well as *Scene Builder*

Embedded Systems Project, The University of Texas at Austin 04/15 – 05/15

- Created a “tag” video game on the *TM4C123 microcontroller* using *C* and *ARM assembly language*
- Placed in “supreme” category

Robotathon 2015, UT Robotics and Automation Society 10/15 – 11/15

- Created a robot car to play RAS-ball
- Programmed in *VIM*

Robot Car Project, The University of Texas at Austin 10/14 – 12/14

- Programmed in *Labview* and built breadboard circuits
- Interfaced photoresistors and IR sensors

PERSONAL PROJECTS

Macro-tracker Web App 10/18

- Created a web-app for tracking macro nutrition using *React.js*, *Node.js*, and *MySQL*
- Designed an API that handles user authentication and database interactions

Gravity IO Game 07/18

- Created an online multiplayer IO game using *Node.js* and *socket.io* with chat and leaderboard features
- Worked with *HTML5 Canvas* elements and *Javascript prototype inheritance*

HackTX 2017, The University of Texas at Austin 10/17

- Created an accessible web-archive of dance videos hosted using *nginx*
- Worked with *Flask* to populate page templates from a CSV database

Personal Server 08/16

- Setup a Proxmox server to host chat, game, and web servers
- Setup Linux containers, VMs, and SSH with RSA encryption

3D design

- Designed an infinity-standing-desk using *SOLIDWORKS* and *Git* 07/16
- Designed and *3D printed* a formicarium using *SOLIDWORKS* and *MakerBot* 04/16

Arduino Projects

- Created an internet controllable desk-light using *Javascript* and *PHP* 09/16
- Created a Bike-Wheel Display using *Image Processing* 02/16
- Created a *5V DC power supply* 12/15

HackTX 2015, The University of Texas at Austin 09/15

- Created a static website using *HTML/CSS*
- Worked with *GitHub*

SKILLS

Experience with *Java*, *C*, *C++*, *Python*, *Bash scripting*, *SQL*, *MATLAB*, *Git*, *Labview*, *TI Code Composer Studio*, *TensorFlow*, *Google App Engine*, and *Android*

Proficient in *Windows*, *OS X*, and *Linux*

Experience with *soldering* and breadboard-circuits

Experience with *Arduino*, *Launchpad microprocessors*, and *TI TMS320C6700 Digital Signal Processors*

Experience with *HTML/CSS* web-design, *Javascript*, *PHP*, *Node.js*, *Flask*, and *React.js*

Experience with *GIMP* and *Photoshop*

Experience with *SOLIDWORKS* 3D design

Familiar with *Spanish* and *Portuguese*

Familiar with *Mandarin Chinese*

ACCOMPLISHMENTS

Texas Tricking Club President, 2017 – 2018

UT Social Dance *Class Assistant*, 2016 – 2018

Huawei Seeds for the Future Participant, 2017

Volunteer: English teacher in Peru, 2014

Volunteer: Veterinary assistant at Cape Town SPCA, 2013

Drumline Lieutenant, Outstanding Leadership Award, 2012-2013

Eagle Scout, 2009