Michael Koger Darden

(972) 762 6663 | mkogerd@utexas.edu
www.mkogerd.com

EDUCATION

Bachelor of Science, Electrical Engineering, August 2018
The University of Texas at Austin
GPA: **3.76/4.00**

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

SKILLS

Languages: Java, C, C++, Python, Javascript, HTML, CSS, Bash, PHP, SQL, MATLAB
Tools*:* Git, Flask, Node.js, Bootstrap, React.js, Google App Engine, Android, scikit-learn, TensorFlow
Other: Windows, macOS, Linux, basic Portuguese, basic Spanish, limited Mandarin Chinese

WORK EXPERIENCE

Student Technician, UT LAITS Jun 2018 – Aug 2018
- Performed daily morning checks of classroom technical equipment
- Handled customer support calls and helped resolve technical issues quickly and efficiently

Student Technician, UT Applied Research Laboratories Jun 2016 – Aug 2016
- Automated LVS software toolchain installation and testing using *Bash* scripting to save time
- Setup GitLab *Continuous Integration* with automatic toolchain testing to increase efficiency
- Tested different tool versions using CI and git submodules to find stable updated tool versions

PERSONAL PROJECTS

Macro-tracker Web-App (http://macros.mkogerd.com) Oct 2018
- Created a web-app for tracking macro nutrition using *React.js*, *Node.js,* and *MySQL*
- Designed an API that securely handles user authentication and database interactions using JWTs

Gravity IO Game (http://game.mkogerd.com) Jul 2018
- Launched an online multiplayer IO game made using *Node.js,* socket.io*, HTML5,* and *ES6*
- Implemented collision and gravity physics in *Javascript* as well as real-time player interactions and chat

HackTX 2017, The University of Texas at Austin (http://dance.mkogerd.com) Oct 2017
- Scraped a web-archive of over 1000 dance videos to organize video meta-data into a CSV database
- Downloaded and reformatted videos using *Python* to increase video load-time and reduce size by 87.5%
- Improved video accessibility by creating a new dynamic front end using *Python* and *Flask* page templates

Embedded Systems Projects
- Created an internet controllable desk-light using *Javascript* and *PHP* Sep 2016
- Assembled a Bike-Wheel Display using *Image Processing* Feb 2016

ACADEMIC EXPERIENCE

Honors Senior Design Project, The University of Texas at Austin Nov 2017 – May 2018
- Collaborated daily with a 5-member team to develop a team-formation web application for UT faculty
- Created a working algorithm prototype in *Python* 2 months ahead of schedule
- Before deadline, increased functionality while reducing runtime by 10x by restructuring *Python* algorithm
- Documented all steps of the design, research, and implementation process

Software Engineering and Design Lab, The University of Texas at Austin Jan 2018 – May 2018
- Co-developed a web-app using *Python, HTML,* and *CSS* to organize a database of 574 cocktail recipes
- Interfaced Google *geocoding* and *timezone APIs* to create a timezone-exchange A*ndroid* app
- Co-developed an online blog site using *Java* and *Google App Engine*

Data Science Lab, The University of Texas at Austin Jan 2018 – May 2018

- Generated new Pokémon artwork with a convolutional GAN, *Tensorflow,* and *Microsoft Azure*
- Placed in top 33% in a mock *Kaggle* competition by using XGBoost, data analysis, and feature engineering

Digital Image Processing Project, The University of Texas at Austin Nov 2017 – Dec 2017
- 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 Oct 2017 – Dec 2017
- Predicted outcomes of baseball games by using rolling averages of player statistics during a season
- Achieved an average accuracy higher than the home-team baseline by ensembling models from *scikit-learn*

Embedded Systems Project, The University of Texas at Austin Apr 2015 – May 2015
- Created a “tag” video game on the *TM4C123 microcontroller* using *C* and *assembly*, ranked as “supreme”

ACCOMPLISHMENTS

Huawei Seeds for the Future, *Participant* Jul 2017
- Selected as one of 18 participants nationwide to receive ICT training at Huawei HQ in Shenzhen, China

Texas Tricking Club, *President* Aug 2017 – May 2018

UT Social Dance, *Class Assistant* Aug 2016 – May 2018

Eagle Scout 2009