# ERIK PETERSEN

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## EDUCATION

**Texas A&M University**
Bachelors in Computer Engineering
Minor in Business
Anticipated Graduation Dec 2021
GPA: 3.1

## NOTABLE CLASSES

**Computer Science**
CSCE 121 Intro to Program Design
CSCE 221 Data Structures & Algorithms
CSCE 222 Discrete Structures
CSCE 313 Intro to Computer Systems
CSCE 315 Programming Studio
CSCE 411 Design/Analysis of Algorithms
CSCE 420 Artificial Intelligence
CSCE 436 Human Computer Interaction
CSCE 441 Computer Graphics

**Electrical Engineering**
ECEN 248 Intro to Digital Systems
ECEN 214 Electrical Circuit Theory
ECEN 303 Random Signals & Systems
ECEN 314 Signals & Systems
ECEN 325 Electronics
ECEN 350 Computer Arch & Design
ECEN 449 Microprocessor Sys Design
ECEN 454 Digital Integrated Circuits
ECEN 403/4 Electrical Design Lab

**Business**
ACCT 209 Accounting Principles
MGMT 209 Business, Gov, & Society
ISTM 209 Business Information Systems
FINC 409 Finance Principals
MGMT 309 Survey of Management
MKTG 409 Principles of Marketing

## SKILLS

**Programming**
Proficient in C/C++, Java, JavaScript, HTML, Verilog, & MatLab
Some Experience with Python, SQL, CAD, and Machine Learning

## EXPERIENCE

**SENIOR DESIGN CAPSTONE PROJECT • TAMU • JAN 2021 – DEC 2021**
Me and a team of three electrical engineering students designed and build an FPV racing drone from the ground up using minimal off the shelf components. As team lead, I was responsible for the flight controller software which tracked the drone's orientation and position in 3D space over time and controlled the output motor speeds. Input from a radio controller and an array of four sensors was used to determine appropriate motor voltages and the system was capable of low-level autonomous adjustments.

**MACHINE LEARNING INTERN • SENSORMATIC • MAY 2020 – JULY 2020**
Modified Intel's OpenVino Machine Learning Pedestrian Tracker demo to operate on a proprietary AI-Oriented edge-compute device integrated into a security camera. Used the experience to create a guide for converting existing code and libraries to function on the edge-compute device including several troubleshooting and debugging examples. The demo was also modified to include a rudimentary loitering detector which automatically defined regions of interest based on pedestrian movement. The project was conducted using x86 Linux virtual machines and the native ARM based Linux environment of the edge-compute device. The process super fun to work on and develop, and I learned a ton about Linux, cmake, library management, and machine learning.

**DATA SCIENCE INTERN • JCI • MAY 2019 – JULY 2019**
Performed market research on various machine learning applications to determine the viability and best method of attaining each solution. Prepared several business presentations and process flow diagrams and presented them to a team of executives. Result was an exhaustive report of the available uses of machine learning and the best companies to partner with for future internal development. The experience helped expand my knowledge of machine learning applications and business processes.

**EMBEDDED SOFTWARE INTERN • TYCO • MAY 2018 – JULY 2018**
Wrote and repaired embedded software in C/C++ for loss prevention systems. This included writing a translation program capable of receiving a data dump in TI-Text and converting it to SREC format. The experience helped to cement my understanding of coding and refined my use of C/C++ while several programs I wrote ended up in the loss prevention systems.

## EXTRACURRICULAR ACTIVITIES

**Engineering Innovation Center**
Design and produce ideas

**Skiing**
Ski yearly during winter break

**Rocketry Club**
Built and tested model rockets

**World Travel**
Visited 16 countries and 25 states

**Tennis Team**
Played tennis up to district level

**National Honors Society**
Participated in volunteer services