

Education*University of Texas-Dallas, Dallas, TX*

Anticipated Date of Graduation: May 2025

Doctor of Philosophy**Major: Computer Engineering****GPA:3.70/4.00***University of Texas-Dallas, Dallas, TX*

Date of Graduation: May 2022

Master of Science**Major: Computer Engineering****GPA:3.70/4.00**

Emphasis: Computer Engineering & Electronics and Communications Engineering

Relevant Coursework:	Computer Architecture	Advanced Digital Logic
Microprocessor Systems	Machine Learning	Real Time Systems Digital
Signal Processing	Speech & Speaker Recognition	

University of Wisconsin-Platteville, Platteville, WI

Date of Graduation: May 2019

Bachelor of Science**Major: Electrical Engineering****GPA:3.25/4.00**

Emphasis: Computer Engineering & Electronics and Communications Engineering

Relevant Coursework:	Analog Electronics	Logic and Digital Design
Programming C++	Signals and Systems	Engineering Computation
Digital Signal Processing	Measurements and Instrumentation	

Experience**Graduate Research Assistant***Cochlear Implant Lab, UT-Dallas Dallas, TX*

August 2021 – Present

- Developing a cloud-based platform to support multi-site remote experiments, data sharing, and cochlear implant users outreach using AWS tools.
- Conducting experiments on Speech Recognition, Speaker Identification, and Sound Classification with recruited subjects through Matlab software
- Outlining user guides for subjects to navigate experiments remotely.

Speech Processing Lab, UT-Dallas Dallas, TX

January 2020 – August 2021

- Explored a study comparing different Machine Learning architectures and their effects on Speech Command recognition on Low powered microcontrollers.
- Achieved 93% - 98% accuracy on developed CNN and DSCNN architectures for speech commands including “STOP”, “LEARN”, “GO”, “OFF”, “FOLLOW”
- Trained CNN models using Google Speech Command Dataset

Academic Student Assistant*Electrical Engineering Dept. UW-Platteville Platteville, WI*

Sep 2018 – May 2019

- Assisted students with HCS12 Microprocessor assembly programming and verified code functionality.
- Assisted students in designing and constructing analog circuits including op amps and transistors.
- Evaluated and graded assignments, projects, and code for various engineering classes

Electrical Engineering Co-op*Seagrave Fire Apparatus LLC, Clintonville, WI*

January 2018 - August 2018

- Designed and updated harness layouts and wiring diagrams and drawing of harnesses and wiring diagrams for heavy-duty vehicles using AutoCAD.
- Designed panels and body parts using SolidWorks to accommodate electrical components on trucks.
- Administered projects pertaining to J1939 protocol rate switch over from 250K to 500K baud.
- Created bill of materials and investigated issues on production floor to perform ECNs.
- Programmed Engine, Transmission, & MD4 Display modules via *IQANdesign* tool.

School Project Experience

Project 1: FPGA Based Video Game

- Designed and deployed an FPGA based video game displayed through a VGA interactive cable. The video game designed was a recreation of “PACMAN” and was implemented using Quartus II software and VHDL programming. User interfacing was implemented through programming buttons and switches on the utilized Altera DE2 board.

Project 2: Text Classification Machine Learning Algorithm

- Designed text classification algorithms using Python to identify valid emails & spam emails.
- Implemented 2 unique classifiers namely “Naïve Bayes” & “Logistic Regression” on the Enron Email dataset to identify spam emails vs. legitimate emails.
- Achieved average accuracy of 80% across both algorithms.

Skills

MS Office, AutoCAD, Solid Works, C++, MATLAB, LABVIEW, Simulink, Verilog, HCS12, MIPS, PCB design, MIPS, IoT, fluent in English & Arabic.

Activities and Honors

Institute of Electrical & Electronics Engineers – Vice President	2019
International Student Advisory Board - Member	2017

References

Dr. John Hansen
Associate Dean for Research in the Erik Jonsson School of Engineering and Computer Science
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Tim Bruhnke
Electrical Systems Support Manager at Seagrave Fire Apparatus
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