Hubert Deng

http://hubertdeng.com
hzdeng2@illinois.edu | hubertdeng123@gmail.com | 919.995.0736

EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

B.S. Computer Engineering
Expected May 2020 | Champaign, IL
GPA: 3.7/4.0

COURSEWORK

Computer Systems Engineering
Data Structures
Discrete Structures
Analog Signal Processing
Algo and Models of Computation
Blockchain and Smart Contracts

SKILLS

PROGRAMMING

Proficient:
Java • Python • C
x86 Assembly • C++
Familiar:
CUDA • CSS • Javascript
HTML • MATLAB • Arduino

TOOLS

Version Control:
Git • Apache Subversion
Build System:
CMake • Make • Gradle
Debuggers:
GDB • Valgrind
Languages:
English • Mandarin

HONORS

IEEE-ETA KAPPA NU

- Top 25% of junior class
- One-on-one tutoring for peers
- Helped coordinate ECE events
- Helped host review sessions

DEAN'S LIST

- Spring 2017, Spring 2018

INTERESTS

PROFESSIONAL

Networking • Machine Learning
Parallel Computing • Control Systems

HOBBIES

Tennis • Cooking • Weightlifting
Ping Pong • Badminton

EXPERIENCE

CATERPILLAR | Software Engineering Co-Op

May 2018 – Present | Peoria, IL & Champaign, IL

- Implemented and trained convolutional neural networks for the NVIDIA Jetson TX2 and NVIDIA Drive PX2
- Ported an image detection app using histogram of oriented gradients to CUDA
- Optimized runtime of the algorithm by 8x the normal runtime speed
- Used socket programming to create a means of communication between ROS2 nodes and the CAN bus for the NVIDIA Jetson TX2
- Working on creating an interface between ROS nodes and Quanergy LIDAR

TECHNICAL UNIVERSITY OF DENMARK | Undergrad Researcher

Jun 2017 – Aug 2017 | Lyngby, DK

- Developed project in Python that achieved supervised learning in robotic joints
- Worked with SpiNNaker parallel computing hardware to simulate a Spiking Neural Network
- Expanded on a closed loop feedback controller that included a cerebellar microcircuit to mimic the learning of the human cerebellum
- Tested the scalability of a neuro-inspired robotic controller to control robotic joints through the expansion onto a system of robotic modules

MEIYA PICO | Software Engineering Intern

Jun 2015 – Aug 2015 | Xiamen, Fujian, China

- Developed an application to retrieve information from websites in Python with five other team members using the Beautifulsoup package
- Designed a GUI that helped the company retrieve data from a variety of sites
- Project parsed through HTML to find keywords to sort the websites based on date and relevance
- Application used by the company to retrieve recent relevant data for the company's news team

PROJECTS

OPERATING SYSTEM Feb 2018 – May 2018

- Linux operating system coded in C and x86 Assembly
- Implemented processor initialization including paging, IDT, GDT, and devices
- Loaded terminal driver, file-system, and real-time clock driver
- Supported system calls and round robin task scheduling, with userspace and kernel space execution

FITNESS ANDROID APPLICATION Jun 2018 – Present

- Developing fitness app that customizes workouts based on personal goals
- Displays a plan of workouts to accomplish certain goals in a specific time period
- Progress is tracked based on changes in personal weight and personal records

PERSONAL WEBSITE Dec 2017 – Present

- Developed personal website written in HTML, CSS, and Javascript
- Used Bootstrap and JQuery libraries to design the interface of the site

AUTONOMOUS MOVING CAR Aug 2016 – Dec 2016

- Created a line following car powered by Arduino RedBoard
- Coded in C to decipher the signals being sent from sensors to the Arduino RedBoard