Hubert Deng

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EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

B.S. Computer Engineering
Expected May 2020 | Champaign, IL
GPA: 3.52/4.0

COURSEWORK

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

SKILLS

PROGRAMMING

Proficient:
Java • Python • C++
x86 • C • 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

CITRIX SYSTEMS | Software Engineer Intern

May 2019 – Aug 2019 | Ft. Lauderdale, FL

- Developed tool for support teams to search for TMF/PDB file data through a large number of company folders
- Created Web Api hosted on ASP.Net in C# to maintain and track millions of files
- Maintained MySQL database to store file states and statuses programmatically
- Created Windows Service that used multithreading to parallelize the file search to optimize runtime
- Used Bootstrap, JQuery, HTML, and JS to create a frontend user interface search and query database for results

CATERPILLAR | Software Engineering Co-Op

May 2018 – Jan 2019 | 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

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

PROJECTS

STOCK VALUATION APP Jan 2019 – Present

- Developing a web application in JS and React/ Redux to help users find stocks to purchase using absolute valuation formulas
- Backend calls to IEXCloud api to retrieve stock data, storing it in MongoDB database
- Uses a variety of algorithms including Benjamin Graham Formula and Discounted Cash Flow to calculate intrinsic value of stocks
- Developing frontend to display information to users

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

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