Kenan Deng

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EDUCATION

Honours Bachelor of Science in Computer Science (in progress)
University of Toronto, St.George campus September 2013 - June 2018

- Current cGPA 4.0
- Computer Science specialist. Focus in Artificial Intelligence and Computer Vision

RESEARCH EXPERIENCE

Episcan3D
Dynamic Graphics Project lab, University of Toronto September 2016 - April 2017

- Researched on imaging methods under epipolar geometry and its various applications
- Developed an automated way to calibrate the episcan system which reduces calibration time
- Provided maintenance to the episcan system and added modification to the system to stabilize the imaging result

Software Defined Networking Controller Application
Research project course, University of Toronto January 2016 - April 2016

- Developed a router and a load balancer based on a distributed SDN controller called beehive network controller using GoLang in group of two people
- Designed a multi-layer decentralized router/loadbalancer hierarchy utilizing beehive structure which assigns routing task to each hive controller and utilized a master level router that resolves pathing problem between different hives located in different servers

WORK EXPERIENCE

Software Engineering Internship May 2016 - April 2017
Modiface Inc, Toronto, ON

- Lead developer of multiple augmented reality apps which do virtual makeup using cameras on iOS system using Objective-C, which later successfully launched into App Store
- Facilitated research and development of a new technique that greatly improved live rendering effect under different lighting conditions
- Designed an application which does nail polish rendering using a leap motion and a projector
- Provided technical support to backend structure of the current application using Javascript and PHP, resulting in overall improvement and more features of backend content management system
- Improved existing augmented reality effects and came up with new ways of rendering for different types of makeup using OpenGL, resulting in a more realistic rendering on face

RELATED COURSES

CSC411H1 Machine Learning (A+)

- Regression, clustering, neural networks, reinforcement learning

CSC320H1 Introduction to Visual Computing (A+)

- Camera model, image representation, edge detection, SIFT

CSC321H1 Neural Networks(A+)

- Convolutional neural networks, recurrent neural networks, Markov Chain Monte Carlo, RBM

CSC384H1 Introduction Artificial Intelligence(A+)

- Uninformed/heuristic search, logical representation, Bayes Nets

CSC418H1 Computer Graphics(A)

- Rasterizing, 3D transformations, ray tracing, animation, OpenGL

CSC485H1 Computer Networks(A+)

- Packet switching, socket programming, network software, hardware, and protocols, network naming and addressing, congestion control schemes, software-defined networking, network security

CSC2503H Foundations of Computer Vision (Graduate course in progress)

- Camera system geometry, image acquisition, robust estimation, image matching, Markov random fields and deep learning for computer vision.

CSC420H1 Introduction Image Understanding(in progress)

- Image formation, features, object and scene recognition and learning, multi-view geometry and video processing

SKILLS

Programming: Python, TensorFlow, OpenCV, Matlab, C++, C, Java, OpenGL, Web programming
Language: proficient in English, Mandarin
Github: https://github.com/dknyxh

HONORS

Dean's List — earned every academic year since 2013
U Of T Scholar — earned every academic year since 2013
Lawrence And Sharen Ho International Scholarship — earned every academic year since 2013

PUBLICATION

El-Hachem, N., Gendoo, D.M., Ghoraie, L.S., Safikhani, Z., Smirnov, P., Chung, C., **Deng, K**., Fang, A., Birkwood, E., Ho, C. and Isserlin, R., 2017. Integrative cancer pharmacogenomics to infer large-scale drug taxonomy. Cancer Research, 77(11), pp.3057-3069.

- Built a web based data visualization system on drug taxonomy using angular and node.js to help visualize the relationship between different drugs