



CURRICULUM VITAE

Name : **Luu Trung Hieu**
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Experience

May 2018 - Present
(3 months)

Freelance OCR project

Work with R&D team to research and deploy convolutional neural networks models for ID card number recognition problem.
+ Framework: TensorFlow, Opencv
+ Language: Python

Aug 2016 - Present
(2 years)

Senior Software Developer

Công Ty Cổ Phần VNG | Ho Chi Minh City, Vietnam

Maintain and develop feature backend server for Talktv(streaming system):

- + Network programming with MCP framework
- + Managing Large-Scale User-Access
- + knowledge about using DB: MySQL, MongoDB, memcached, Redis
- + Research and deploy transcode stream using GPU
- + knowledge about linux: Ubuntu, CentOS

Develop feature for client side (PC)

- + Client can stream game DOTA2
- + use ffmpeg to implement a player
- + Synchronization Audio and Video

Sep 2015 - Sep 2017
(2 years 1 month)

Capsule project

Capsule

Develop a new surveillance system (named as Capsule) can do human detection on a region and send alarms to user via audio, mail, push notification.

Worked as researcher and developer on this product to find and implement the efficient algorithm. The algorithm must guarantee real-time performance on every step when run on low cost device (AMLOGIC S905, S912) .

Experiences in:

- + Image processing: Motion detection, labelling, face detection
 - + Machine learning: SVM, Neural network
 - + Camera IP techniques: ONVIF, RTSP
 - + Software development: C/C++, Python, Network programming, Web server, OpenSSL, Boost
- C++, dlib, OpenCV
- + Work with device that use ARMv8 cpu like: AMLOGIC S905, S912
 - + Linux environment

May 2015 - Aug 2016
(1 year 4 months)

Senior software engineer
I3 DVR International

Mainly be responsible for maintain and development new feature for digital video management software

Project-Based Experiences:

- + Multi-threading Programming
- + Network Programming
- + Media Programming (Audio/Video, Codec)
- + Web servers, Application servers
- + Client/Server Model

2013 - May 2015
(2 years 5 months)

Senior Software Developer
FPT software

Mainly be responsible for processing video input or DIRECTV digital satellite television system

Project-Based Experiences:

- + Work with streaming-format: HLS, DASH
- + Experience with mpeg2, ts packet
- + Network programing, multi-threading programing
- + synchronization in Adaptive bit-rate streaming

Mar 2010 - May 2011
(1 year 3 months)

Software Engineer
Renesas Viet Nam | Ho Chi Minh City, Vietnam

Mainly be responsible for development device driver for specific board.

Project-Based Experiences:

- + Knowledge about Linux and Android
- + C/C++ Linux Software Development
- + Version control: Git, SVN
- + Scripting language: BASH, C-Shell

Education

2013

HCMC University of Technology
Master's Degree in Computer Science/Information Technology | Vietnam

Major Computer Science

Thesis: "Recognizing human behaviors in intelligent surveillance system"

Short brief: my thesis recognizes human behavior based on motion trajectories of objects. Steps include: motion detection, object tracking and behavior analysis. Behavior analysis implemented in this thesis includes behavior anticipation and abnormal behavior detection. To analyze human behavior, there are many methods proposed such as support vector machine, hidden Markov model (HMM), hierarchical finite state automata. HMM is chosen because of its robustness in analyzing trajectory-based human behavior.

Language: C/C++

Library: OpenCV, bgslibrary, cvblob.

Paper:

[1] Le Thanh Sach, Luu Trung Hieu, "A new method for detecting abnormal behaviors in surveillance system", ACOMP2013, 2013.

[2] Le Thanh Sach, Luu Trung Hieu, "A Fast Temporal Median Filter and Its Applications for Background Estimation in Video Surveillance", SOCPAR13, 2013.

2010

HCMC University of Technology

Bachelor's Degree in Computer Science/Information Technology | Vietnam

Major **Computer Science & Engineering**

Thesis: "Applying simulated annealing algorithm re-heated to the traveling tournament problem"

Short brief: my thesis solves traveling tournament problem by using simulated annealing algorithm. The problem has many constraints such as: distance between cities, a team does not play three consecutive matches in the same city. Therefore, the result easily falls into the local optimum. My thesis uses simulated annealing algorithm re-heated to escape the local optimum. The results show the efficiency of the algorithm in traveling tournament problem.

Language: Java

Skills

Advanced

Computer Vision, C/C++ programing, machine learning, Audio and Video streaming, multi-threading, network programing
