Chenhao Liu

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EDUCATION

Department of Electronic Engineering, Tsinghua University   Aug 2013- Jul 2017

B.E. in Electronic Engineering, Overall GPA: 86/100, Rank: 32/196

GRE: Verbal - 157 (75% percentile) Quantitative - 168 (95%) Analytical Writing - 4.0

TOEFL: Total 108 (Reading 29, Listening 29, Speaking 23, Writing 27)

Core Courses: Calculus, Linear Algebra, Probability and Stochastic Processes, Discrete Mathematics, Data and Algorithm, Database, Introduction to Auditory-visual Information System, Media and Cognition, Digital Image Processing, Fundamentals of Statistical Signals Processing, Fundamentals of Pattern Recognition.

CURRENT RESEARCHES

Microexpression Analysis for Psychological Purpose | Tsinghua University | Research Assistant   Mar 2016 - Present

Advisor: Huimin Ma, associate professor at Department of Electronic Engineering, Tsinghua University

➢ Aim at detecting and interfering mental unhealthiness using behavioral experiments.

➢ Detect facial microexpression of subjects by analyzing muscular micromovements.

➢ Analyze psychological condition on the basis of multiple features of the facial movement energy.

➢ Interact with lab's state-of-the-art behavioral experiment system.

A Multi-Stage Approach to Curve Extraction | Brown University | Research Assistant   Jul 2016 - Present

Advisor: Benjamin B. Kimia, professor at School of Engineering, Brown University

➢ Aim at a multi-stage curve extraction system for better performance in both accuracy and efficiency.

➢ Work on a system for symbolic edge linking and merging to solve the ambiguity in the formation of long contour fragments.

➢ Use an optimization method to find best linking hypothesis under a proposed object function.

➢ Propose a method for contour evaluation on CFGD dataset.

RESEARCH EXPERIENCE

Vehicular Networks and Applications for Urban Computing | Tsinghua University | Research Assistant Sept 2014 - Mar 2016

Advisor: Yong Li, assistant professor at Department of Electronic Engineering, Tsinghua University

➢ Aimed at establishing a vehicular cloud computing system under IEEE 802.11p for computational capacity collection and reallocation.

➢ Focused on proposing a system model and simulating its local and global performance using big-data of taxi traces.

➢ Quantified the capacity of vehicular fog computing system and analyzed the spatial and temporal feature of the system.

➢ Drafted two journal papers based on this project.

PUBLICATIONS

1. **Chenhao Liu,** Yong Li, Min Chen, Di Wu and Depeng Jin. Quantifying the Capability of Vehicular Fog Computing, ***IEEE Transactions on Intelligent Transportation Systems***, under major revision.

2. Chuanmeizhi Wang, **Chenhao Liu**, Yong Li, Depeng Jin and Sheng Chen. Jamcloud: Turning Traffic Jams into Computation Opportunities, ***ACM Mobihoc***, under major revision.

SKILLS

Software Programming: C/C++, Matlab, Python, SQL, OpenCV, Qt Gui, C#.

Hardware Programming: Verilog HDL.