

# Junjie Guan (Jack)

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## INTERESTED FIELD

Networking, Cloud, Distributed Computing,  
Web Design, Web Development

## PROFESSIONAL EXPERIENCE

Co-founder & lead developer

### *ArtxChange*

A marketplace that connect artists, buyers and non-profit organizations. Artists sell artwork while also fundraises for innovative, socially beneficial projects, which is beneficial to both artist and the society.

JAN 2014 – PRESENT

Software Developer @ Tiltfactor, Dartmouth

### *Metadata Project*

- 1) Develop full-stack games (i.g, StupidRobot), and collect meta data from user's input.
- 2) Develop plugins such as the meta data export plugin
- 3) Fix any issue listed in bug tracker (Asana). Cooperation with other programmers around the world using Git.

Granted from National Endowment for the Humanities (NEH), a open source, internetbased system for augmenting access to archival records.  
Url: <http://www.metadataagames.org/>  
Repo: <https://github.com/jack2684/mg-game>

SEP 2013 – MAR 2014

Research Assistant @ NetLab, Tsinghua University

### *DCloud: Deadline Guaranteed Cloud Computing*

- 1) Design a new datacenter resource allocation mechanism, by considering deadline into job scheduling;
- 2) Build thousands of lines of C++ simulations program;
- 3) Implementation on a 16-machine cluster, writing controlling program with Python and Bash shell;
- 4) Validating efficiency with Hadoop application using; Java,
- 5) Try compare with optimal solution using IBM Cplex;

Increase job throughput by 30~50% comparing to state-of-art, submitted to ACM SIGCOMM 2013.

SEP 2012 – FEB 2013

Research Assistant @ Innovation Project Center of BUPT

### *SIDES: Scalable Intelligent Distributed Emergency System*

- 1) Propose the idea of a decentralized self-organize wireless-based emergency system that generates real-time evacuation strategy to save lives in fire hazard,
- 2) Design the the distributed protocol.
- 3) Conduct simulation on C++ program, and implement in Zigbee wireless nodes using C.

Shorten evacuation by 50% comparing to normal strategy, Won first prize as National Class Innovation Project.  
Publication: **Guan, Junjie**, Yanyi Wu, Jinming Ma, Tao Li, Chunlei Xie, Yuli Mo SIDES: Scalable Intelligent Distributed Emergency System, accepted by IC-NIDC2012

AUG 2011 – JUL 2012

## EDUCATION

2013 – 2015 **Dartmouth College**  
COMPUTER SCIENCE, M.S.

2009 – 2012 **Beijing University of Posts and Telecommunication**  
COMMUNICATION ENGINEERING, ,  
B.S.

## PROJECT IN COMPETITION

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DEC 2011 – MAY 2012

Team Leader @ Microsoft Imagine Cup 2012

### *UpAround Social Platform*

- 1) Proposed the idea of a location-based social platform, and initiated a technique team of four.
- 2) Manage the product development and presentation.
- 3) As lead programmer, built a full-stack social platform on .Net framework.
- 4) Design and develop a highly-interactive UI using javascript/jQuery, html5 and css3.

Gained the 3rd prize in Software Design China Zone (6%).

Youtube Url: <http://goo.gl/jwzWQq>

## INDEPENDENT WORK

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SUMMER 2012

Undergraduate @ Future Network Lab of BUPT

### *Status-Based Content Sharing Mechanism for CCN*

Reduce overheads and increase transfer rate by around 30% in Content-Centric Network by pre-determining a host based on source status. Then built a experiment network based on CCNx using C.

Publication: **Guan, Junjie**, Xudong Wang, Yu Xia, Tao Huang, Liang Wei Status-Based Content Sharing Mechanism for Content-centric Network, accepted by ICCT2012

APR 2011 – MAY 2011

Undergraduate @ Internet Research Department Center of BUPT

### *WAP Topology Property Analysis: Comparison With WWW*

- 1) Developed a multi-thread web crawler using Python.
- 2) Keep recording statistics for weeks using mySql.
- 3) Analyzed the topology characteristics of WAP, e.g. degree distribution and clustering coefficient.