Junjie Guan (Jack)

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Education

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

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

Interested field

Distributed System, Service Oriented Architecture

Professional Experience

APR 2015 – PRESENT

SDE @ Amazon AWS
AWS Lambda

Major experiences:
1) Lambda function versioning. A demanding feature that affect almost almost all the APIs and underneath function management architecture.
2) Implement a test account pool service. This avoids tests resource conflicts and unexpected account state change. Also it makes test parallelization possible.
3) Implement a map reduce log analysis tool, which reduce analysing Terabytes of data from serveral days, to a few hours.
4) Build fine grain monitors and metrics upon the service.

JUN 2014 – AUG 2014

SDE Intern @ Amazon AWS
Builder Tools, Package Builder Services

1) Implement the Auto-Unprune feature to relief customer from tedious working around broken packages.
2) Implement pacakge build history API as strech project.

SEP 2012 – FEB 2013

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 controling 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.
A related former project where I contribute publication: Publication: Dan Li, Jing Zhu, Jianping Wu, **Junjie, Guan**, Guaranteeing Heterogeneous Bandwidth Demand in Multi-tenant Data Center Networks, accepted by IEEE/ACM Transactions on Networking 2014

Academic Experience

Software Developer @ Tiltfactor, Dartmouth
Metadata Project

Full stack development on a website that collect image metadata via crowdsourcing during games. Url: http://www.metadatagames.org/

Student @ Dartmouth
Mobile Health

Course project of an android app integrated with a EEG device, able to audit human stress level in real time. Worked on the android APP part. Url: http://jack-mhealth.weebly.com/

Student @ Dartmouth
Yalnix OS

Course project in Opearting System class. Pure individual work. Highest score on the final project review.

Software Developer @ 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 evaucation strategy to save lives in fire harzard,
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: **Junjie, Guan**, Yanyi Wu, Jinming Ma, Tao Li, Chunlei Xie, Yuli Mo SIDES: Scalable Intelligent Distributed Emergency System, accepted by IC-NIDC2012

Project in Contest

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: https://www.youtube.com/watch?v=b8UHGPxJFyQ