

Binhan Xu | Resume

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Education

University of California, Santa Barbara(UCSB)

Department of Computer Science

1st year Master Student in Computer Science

GPA: 3.74/4.0

Courses: Scalable Internet Services, Augmented Reality, Database Management System, Smartphone-centric Application Development, Runtime System, Advanced Distributed System, Advanced Computer Vision

Goleta, CA

2015.09–present

University of Electronic Science & Technology of China(UESTC)

School of Electronic Engineering

Bachelor of Engineering in Electronic Information Engineering

GPA: 91.8/100, Major Rank: 1/358, **Scholarship: National Scholarship in 2012 & 2014**

Chengdu, China

2011.09–2015.07

Programming Skills

Frequent Use: C++, JAVA, Python, OpenCV, OpenGL, MATLAB

Other Programming Tools: Ruby on Rails, Android, HTML5, Bash, Git

Course Projects

Distributed System Implementation based on RAFT protocol (Python)

UCSB

Goleta, CA

2016.03–2016.06

- Developed system architecture consisting of multiple datacenters and requesting clients.
- Wrote Python code to implement RAFT consensus algorithm as data management protocol to ensure correctness of log propagation across datacenters.
- Implemented leader, candidate and follower modules and their respective duties during RAFT process.

3D AR Tetris Game (Vuforia, Android, OpenGL)

UCSB

Goleta, CA

2015.09–2015.12

An interactive **Android** Tetris Game using Augmented Reality technology.

- Implemented the backend logic of 3D AR Tetris Game using OOP framework.
- Achieved marker-based manipulation to enable AR control of tetris movement.
- Wrote code to achieve critical functions and modules, including angle detection, border detection and coordinate system transition.

ProductGrabber (Ruby on Rails)

UCSB

Goleta, CA

2015.09–2015.12

A web service featuring 100k-product catalog and product attribute comparison functionality.

- Developed features about product preferences, product comparison and product recommendation.
- Conducted vertical Tsung tests on AWS to test scalability of our web services.

Research Projects

Video stabilization using hybrid approach (C++, MATLAB)

Image & Video Processing Laboratory, UESTC & MSRA (2 weeks)

Chengdu, China & Beijing, China

2014.09–2015.05

Achievement: Improved current approaches in video stabilization. Specifically tackled on videos with near-range content.

- Introduced infinite-homography estimation into state-of-the-art video stabilization approach to reduce content distortion when stabilizing near-range video clips.
- Developed adaptive hybrid motion estimation model to associate model selection with video content.
- Resulted in a TCSVT (IEEE Transactions on Circuits and Systems for Video Technology) publication.

Multiple video mosaicking (C++, MATLAB)

Image & Video Processing Laboratory, UESTC

Chengdu, China

2014.09–2015.05

Achievement: Able to stitch multiple video clips with overlapping content together to render a larger view.

- Co-developed the processing framework based on bundle-path motion estimation model (currently only used in video stabilization).
- Granted **Central University Research Funds**.

Publication

A Hybrid Approach for Near-Range Video Stabilization

Shuaicheng Liu, **Binhan Xu**, Chuang Deng, Shuyuan Zhu, Bing Zeng, Moncef Gabbouj.

IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2016