Chongyang Bai

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Education

University of Science and Techonology of China (USTC)

- B.S. in Information & Computational Science (Computational Mathematics) *Sep. 2012 - Jun. 2016*
  - GPA: 3.66/4.30, Rank: 25/120, Average Score: 86.90/100
- B.Eng. in Computer Science and Technology (Dual) *Mar. 2014 - Jan. 2016*

Experience

- **Teaching Assistant for Software Engineering** USTC
  Instructor: Dr. Hongping Deng *Jun. 2016 - Aug. 2016*
  - Illustrated methods of C/C++ code optimization.
  - Hosted office hours and participated in software projects developing discussions.
- **Generalized PolyQuad Aided Planar Quadrilateral Mesh Generation** Microsoft Research Asia
  Advisor: Dr. Yang Liu *Feb. 2016 - Jun. 2016*
  - Studied planar quad meshing demands and methods: paving, medial axis, field guiding and transfinite mapping.
  - Constructed generalized PolyQuad to generate singularity controllable planar quadrilateral meshes efficiently and robustly.
  - Developed a GUI incorporating our new algorithm based on Qt, CGAL and MOSEK.
- **Seminar about Computer Graphics** Microsoft Research Asia
  Supervisor: Dr. Xin Tong, Dr. Yang Liu and Dr. Yue Dong *Jul. 2015 - Jun. 2016*
  - Discussed recent papers published in SIGGRAPH, SIGGRAPH ASIA and CVPR **every weekday**, including geometric modeling and processing, image based modeling and rendering, appearance modeling and facial animation.
- **Volumetric PolyCube-Map Construction and Hexahedral Meshing** Microsoft Research Asia
  Advisor: Dr. Yang Liu *Jul. 2015 - Mar. 2016*
  - Studied PolyCube construction methods: grid-based, divide and conquer, deformation, GraphCut and l_1-based.
  - Implemented state-of-art PolyCube construction methods: deformation and GraphCut .
  - Developed mesh labeling, segmentation and flattening module of our algorithm, our **paper[1]** is accepted by Pacific Graphics.
- **Word Reciting Module of Microsoft Bing Dictionary** Microsoft Research Asia
  Advisor: Qiufeng Yin *Sep. 2015 - Jan. 2016*
  - Introduced a new metric of the familiarity of a word and employed the algorithm 'MemReflex' to compute the reminder time of next word review.
  - Designed a refreshing and friendly user interaction including counting down, undoing and word addition/deletion.
  - Developed the universal windows platform **App[2]** by C# and XAML.

Awards & Honors

Stars of Tomorrow in Microsoft Research Asia Internship Program	2016
Outstanding Undergraduate in USTC (Top 20%)	2016
Outstanding Student Scholarship in USTC (Top 20%)	2015
National Endeavor Fellowship (Top 10%)	2014
Kwang-Hua Scholarship (Top 10%)	2014
Outstanding Freshman Scholarship in USTC (Top 30%)	2012

Course Projects

- **The Four Arithmetic Operations of Big Integer** *Oct. 2015*
  - Implemented fast $+, -, \times, \div$ operations of big integers with C++, in which only 8s is used to calculate the product of 2 numbers of 1 million digits.
- **Design and Implementation of 3D Action Game: Dhammapala** *Apr. 2015 - Jun. 2015*
  - Built the game scene by basic scene elements with 3D MAX.
  - Implemented the movements and fight actions of characters with Unity 3D.
- **Design and Implementation of Face Image Recognition Algorithm with Matlab** *Jun. 2015*
  - Combined 2D principal component analysis (2DPCA) with linear discriminant analysis (LDA) to extract features of face images.
  - Multi-classified face images based on support vector machine (SVM).
- **Implementation of Parser Functions with Bison and Flex** *Nov. 2014*
  - Translated arithmetic expressions to suffix expressions.
  - Printed parsing tree of regular expressions.

Skills

Computer Languages	**C/C++**, C#, Matlab, Mathematica
Libraries	OpenGL, OpenCV, Qt, CGAL
Tools	Microsoft Visual Studio, Github, Unity 3D
Others	accordion performing

Other Experience

Volunteer in Kongdian Primary School, taught basic music theories and piano in music courses, answered questions for students' homework.	2015
Accordion performing in New Year Concert and Freshman Welcome Evening of USTC.	2012, 2013
Participated in USTC Star Basketball Game.	2012, 2013

Publications

[1] Xiaoming Fu, **Chongyang Bai**, and Yang Liu, "Efficient Volumetric PolyCube-Map Construction," Computer Graphics Forum (Pacific Graphics) 35(7), 2016.

[2] Wei Zhang, **Chongyang Bai**, Liyuan Liu, Renqian Luo, and Shuo Ren, "Word Reciting Module of Microsoft Bing Dictionary UWP (V2.2.0)," Microsoft Store, 2016.