Rinat Abdrashitov

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Dynamic Graphics Project Lab
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EDUCATION

University of Toronto (Toronto, Canada) Jan. 2016 – present
1st year PhD, Computer Science
Supervisor: Karan Singh

University of Toronto (Toronto, Canada) Sep. 2013 – Jan 2015
Master of Science, Computer Science
Supervisors: Karan Singh, Ravin Balakrishnan

University of Toronto (Toronto, Canada) Sep. 2008 – June 2012
Honours Bachelor of Science with Distinction, Computer Science

WORK EXPERIENCE

Conceptualiz Inc. (Toronto, Canada) Feb. 2015 – Jan. 2016
Graphics Software Engineer

- Built an iPad application from ground up that allows orthopedic surgeons to perform pre-operative planning in 3D.
- Developed a custom real time rendering engine (OpenGL, C++) to render dense meshes of bone tissue on mobile GPU.
- Created a set of powerful tools to edit meshes of bone tissue and design surgical implant models.
- Designed an intuitive gesture-based user interface that allows users with no previous experience of CAD or 3-D modeling to quickly start working with the app.
- Successfully released the app (named Ossa) to the Apple's iPad App Store.

XtremeLabs Inc. (acquired by Pivotal Labs) (Toronto, Canada) Sep. 2012 – June 2013
Software Developer

- Developed high profile iOS applications starting from the concept to submitting the finished product to the App Store.
- Collaborated closely with designers to optimize the application UI subject to device limitations.
- Gained extensive experience in objective-oriented programming using Objective-C, Java and Cocoa toolkit.
- Fixed critical bugs for the released BlackBerry applications in a short period of time.
- Directly communicated with project managers and clients to discuss weekly builds.
- Worked effectively with QA team to resolve any technical issues and bugs of the application.

RESEARCH EXPERIENCE AND PUBLICATIONS

Siggraph 2014
Interactive Shape Modeling using a Skeleton-Mesh Co-Representation.
J. Andreas Bærentzen, Rinat Abdrashitov, Karan Singh.

International Symposium on Sketch-Based Interfaces and Modeling 2014
Mosaic: Sketch-based interface for creating digital decorative mosaics *(Best paper award)*.
Rinat Abdrashitov, Eric Yao, Emilie Guy, Karan Singh.

Summer Research Student, University of Toronto (Toronto, Canada) May-August 2012
Supervisor: Professor Kenneth R. Jackson
Project Title: Algorithms for medical imaging and GPU parallelization

- Parallelized poly-energetic nonlinear iterative reconstruction algorithm for X-ray computerized tomography using MATLAB Parallel Computing Toolbox.
- Suggested a better method for solving the nonlinear least squares problem that arises in the algorithm.
- Reduced computation time by more than 60% using only 4 CPU cores. .

TECHNICAL SKILLS

Programing Languages:
C++, C, Python, Unix Shell, Maya C++/Python API, OpenGL, Objective-C, Java.

Software, Tools, Operating Systems:
Autodesk Maya, NumPy, Matlab, Unix/Linux programming, Git.

PATENTS

System and Method for Interactive 3D Modeling of Surgical Implants
Richard Hurley, Rinat Abdrashitov, Karan Singh, Ravin Balakrishnan, James McCrae
(US Patent filed 2015).

TEACHING EXPERIENCE

- Computer Graphics (CSC418), University of Toronto
- Software Tools and Systems Programming (CSC209), University of Toronto
- Software Design (CSC207), University of Toronto

AWARDS

- NSERC Postgraduate Scholarships-Doctoral Program. $21000 a year (for three years). May 2016.
- University of Toronto Undergraduate Excellence Awards in the Natural Sciences & Engineering. $5625, May 2012 – Sep. 2012.
- Harold Willett Stewart Scholarship. $1523, September 2013.
- Isabel Warne Scholarship. $1000, September 2013.