Jinmiao Huang

Aspiring interactive computer graphics software developer

Williamsville, NY
victkid@gmail.com - (917) 698-2598

- 5+ years experience in programming large scale human-computer interactive applications
- Solid background in algorithm,proficient withC/C++, Matlaband Python
- Professional experience with various software toolkits (CGAL, Qt, OpenGL, OpenCV, Eigen, Boost) and high-level script languages (Matlab, Python and R)
- Extensive knowledge of software architecture, design, implementation, and qualification
- Hands-on experience of machine learning, pattern recognition, 2d/3d image processing, computer vision and computer graphics.
- Intensive computational and mathematical background (linear algebra, statistics, and numerical methods)
- Experience with version control software (svn and git) and multi-threading programming
Sponsorship required to work in the US

WORK EXPERIENCE

Research Assistant

University at Buffalo - Buffalo, NY - January 2010 to Present

- Currently serve as team technical lead on developing different machine learning based interactive applications using C++
- Invented and applied continuous improvement to a gesture based next generation 3D modeling system using depth camera
- Boosted the accuracy of a user Independent hand posture recognition system to 95% (±5%) for ten postures
- Analyze and develop state-of-the-art recognition algorithms to various products, including techniques such as Bayesian Network, Hidden Markov Model, Support Vector Machine, Random Forest and Convolutional Neural Network
- Conceptualized and developed a novel robotic mechanism for vascular surgery with compact size and high feeding accuracy
- Discovered the catheter insertion robot automation by applying unsupervised learning modules to the robot

Research Asisstant

Buffalo General Medical Center - Buffalo, NY - February 2013 to August 2013

- Collaborated with surgeons to test and improve the functionalities of a Endovascular Surgery Robot Prototype

- Co-developed a haptic assistance system with predictive actions and force feedback to minimize operation error
- Blended the X-ray image to a virtual 3D environment with motion estimation technique to track the catheter tip

Software Engineering (Intern)

Tactus Technologies, Inc - Getzville, NY - April 2011 to December 2011

- Contributed to the development and testing of virtual cadaver dissection simulator to aid in medical studies
- Innovated a pave based meshing algorithm to effectively (4 times faster) generate hexahedral mesh for human organ
- Enhanced the hexahedral mesh quality by applying Newton's method and BFGS optimization algorithm

Manufacturing Intern

Chongqing Jianshe Motorcycle Co., Ltd   -   重庆市 - July 2008 to October 2008

• Operated CNC milling machine to manufacture high precision motorcycle parts
• Manufactured various parts on conventional lathe and drilling machines

EDUCATION

PhD in Artificial Intelligence

University at Buffalo - Buffalo, NY

2011 to 2015

Master of Science in Design and Optimization

University at Buffalo - Buffalo, NY

2009 to 2012

SKILLS

Machine Learning, Human Computer Interaction, Computer Graphics, Computational Geometry, Computer Vision, Image Processing, Virtual Reality, C++, Matlab, OpenGL, Qt, 3D Studio Max, Blender, CGAL, Boost C++, Eigen, Python, R, Java, HTML+CSS, wxWidgets, MFC, Inventor, Git, SVN, SolidWorks, CMake, PTC Creo, LabVIEW

LINKS

http://victkid.wix.com/home