Bernadette Tix

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Curriculum Vitae

PUBLICATIONS

Berkelman, P., & Tix, B. (2020). Simultaneous Independent Translational and Rotational Feedback Motion Control System for a Cylindrical Magnet Using Planar Arrays of Magnetic Sensors and Cylindrical Coils. *IEEE Magnetics Letters, 11*, 1-5.

Berkelman, P., Tix, B., & Abdul-Ghani, H. (2019). Electromagnetic Position Sensing and Force Feedback for a Magnetic Stylus with an Interactive Display. *IEEE Magnetics Letters, 10*, 1-5.

Avery, B., Garner, G. (2011) *Digital Image Printing* (US Patent No. US8789904B2) (Filed under previous name B.J. Avery)

EXPERIENCE

DEC 2017 – PRESENT

SYSTEMS ANALYST, ANCHORAGE SCHOOL DISTRICT

Automated King Tech Scheduling process. Managed Summer Oasis and other State Reporting for multiple years. Implemented ticketing assignment recommendation system. Added multi-lingual capability to Online Registration and led Online Registration team. Performed cost-benefit analysis and implementation of HOA Health System. Lead Instruct Prog Export Schema team. Member of Strategic Taskforce Outcome Monitoring Team.

JAN 2017 – DEC 2017

TEACHING ASSISTANT, UH MANOA, DEPT. OF COMPUTER SCIENCE

Ran labs, wrote and administered quizzes, provided tutoring, graded papers and programming assignments. Courses in Artificial Intelligence and intro to computer science.

JAN 2015 – AUG 2017

RESEARCH ASSISTANT, UH MANOA, HUMAN ROBOT INTERACTION LAB

Developed novel medical application for magnetic levitation in wireless endoscopy. Work included designing and performing experiments and statistical analyses, circuit design and construction, simulation design and construction, software programming, and academic writing.

JUN 2015 – NOV 2015

ROBOTICS CONSULTANT, AKABOTICS

Designed and built control system for aquatic canal-dredging robot with both fully autonomous and remote-control modes. https://www.akabotics.net/

APRIL 2014 – DEC 2014

PROGRAMMER ANALYSIT, BENTON COUNTY, OR

Built efficient automated software for previously slow and manual property tax review, environmental health incident tracking, and project finance reports.

NOV 2010 – APRIL 2013

SOFTWARE ENGINEER, HEWLETT PACKARD

Cut costs by over $1M by increasing efficiency of R&D tools and production line control software. Patented high-speed printing algorithm for inkjet printers, dramatically increasing the speed of end-of-line testing procedures. (Patent# US8789904B2, filed under previous name). Developed and deployed control software for R&D and manufacturing tools in USA and Ireland.

EDUCATION

JAN 2017 - PRESENT

(IN PROGRESS) PHD COMPUTER SCIENCE, UNIVERSITY OF HAWAI'I AT MANOA

My PhD research is focused on the areas of Artificial Intelligence and Natural Language Processing.

JAN 2015 - MAY 2017

MS MECHANICAL ENGINEERING, UNIVERSITY OF HAWAI'I AT MANOA

4.0 GPA. Focus on Robotics. Thesis title: A Magnetic Localization Technique Designed for Use with Magnetic Levitation Systems

AUG 2006 - MAY 2010

BS COMPUTER SCIENCE, NORTHERN ARIZONA UNIVERSITY

Minors in Mathematics and Mechanical Engineering

PROGRAMMING LANGUAGES

- C++ 9 years
- OpenGL 9 years
- Java 9 years
- .Net 7 years
- SQL 5 years
- .Net MVC 4 years
- C 4 years
- Arduino 3 years
- MATLAB 3 years
- Javascript 2 years
- Fortran 1 year
- PHP 1 year

SOFTWARE PROFICIENCY

- Visual Studio
- SSRS Reports
- SSMS
- Microsoft Office
- Sharepoint
- Jira
- Eclipse
- Google suite
- Microsoft Project
- Microsoft Access
- Solidworks
- Linux

VOLUNTEER ACTIVITIES

- Fencing Instructor, Schola St. George (Anchorage & Honolulu) *January 2015 – Present*
- Graduate Student Government Student Advocacy Lead, Honolulu *June 2017-June 2018*
- Instructor, "Creative Programming", CRDG, Honolulu, HI *June 2015 - August 2015*
- Math Tutor at College Hill High School, Corvallis, OR *December 2014 - April 2014*
- Mentor for FIRST Robotics Team 997, Corvallis OR *2012 and 2013 seasons*