
Reza Ferrydiansyah

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Objective

To work in an innovative organization and develop cutting edge software that enhances human capabilities.

Education

PhD, Computer Science Engineering, with Specialization in Cognitive Science,

May 2011 (Expected)

Michigan State University. GPA: 3.89

Dissertation Topic: Generation of a constrained natural animated human motion from motion captured data

MSc, Health Information Systems, August 2005

University of Pittsburgh. GPA: 3.90

Research Topic: Increasing web accessibility for the visually impaired using a web page transformation system

Bachelor, Informatics, February 2001

Institut Teknologi Bandung, Indonesia. GPA: 3.21

Undergraduate Thesis: Automatic Agent Behavior Builder using Genetic Programming

Work Experience

Research Assistant, Michigan State University 2005-Now

Media and Entertainment Lab:

- Analyzed motion captured data using statistical methods to create a natural pose hyperspace. Used this hyperspace to generate constrained poses and motion which are more natural than using regular inverse kinematics methods. Used Visual Studio (C++) and OpenGL to visualize the results of the algorithm.

Media Interface Network Design Lab

- Used a Biopac system to compare human physiological (muscle movement) response to natural and unnatural animation.
- Created a prototype of an Augmented Reality digital map using Python

Head Graduate Assistant, CSE 101, Michigan State University, 2007-Now

- Designed and coded various tools for the CSE 101 administration website which is used by the CSE 101 teaching staff to increase data gathering and reporting using PHP and MySQL. Was placed in a supervisory role to train and organize other head graduate assistants.
- Maintained and expanded an automatic grading system that to reduce time for grading of 1500 students/semester by 40%

Intern at General Motors, R&D Department 2008

- Developed a vehicle co-simulation framework that allows the use of different simulink/matlab modules. Involved in the design of communication protocol between modules.

Developer, Blomap.com, 2008-2009

- Expanded the Dzoic social networking platform to support location based social networking communities. Built both the back end and front end map interfaces that allows the addition of locations by administrator and users.

Founder of Mapdaze.com, 2007

- Designed and developed from the ground up, a PHP/AJAX application that simplifies the embedding of Google maps in blogs. Developed a social and facebook version of this application to increase usage.

Research Assistant, University of Pittsburgh, 2003-2005

- Developed a Java servlet web page transformer that divides web-pages into semantic units and modify the navigation between the units. The resulting page was used by people with visual disability to more easily navigate web pages. Designed a modular architecture that allows the use of multiple transformation modules to allow experimentation on the usage of different modules.

Lecturer, Institut Teknologi Bandung, 2002-2003

- Designed, developed, and tested an online PHP game that allows students to practice using programming skills to solve problems. Used lex and yacc to create a simple interpreter for student's code. Created a scheme that scores the students' code based on the quality and efficiency of the algorithm.

Selected Publications

Reza Ferrydiansyah, Charles B. Owen, *Natural Pose Generation from a Reduced Dimension Motion Capture Data Space*, Paper presented at the International Symposium on Visual Computing 2009, Las Vegas, Nevada

Reza Ferrydiansyah, Felicia Berryman, Jo Smith, Daniel Rairigh, *An Auto Grading System for Criteria-based Tests in a Computer Competency Course*, Virtual Presentation for the E-Learn 2009 Conference, Vancouver Canada.

Reza Ferrydiansyah, Bambang Parmanto, *Understanding web documents: finding pagelets for transformation using structural patterns*, Published in the International Journal of Web Engineering and Technology, Vol 4 No 3 Page 313-335 2008.

Grant and Awards

- 2008 – **Entrepreneur Faculty for the 21st Century Fellowship** (Michigan State University). Fellowship towards entrepreneurial training related to research.
- 2002 – **Quality Undergraduate Education Research Grant** (Institut Teknologi Bandung). Research Grant towards the completion of Algoshop, an online game for learning computer programming

Skills

- Programming languages: C/C++, Java, Pascal, Visual Basic, PHP, Perl, Javascript, JSP, HTML, CSS
- Databases: Oracle, MySQL, MS Access
- Tools: OpenGL, Simulink, Matlab, AJAX, lex, yacc, dojo, xajax
- Operating System: Unix, Windows