

Velko Vechev

Interaction Design and Research

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Current Studies and Interests

Interaction Design Masters Student at Chalmers University of Technology in Gotheburg, Sweden interested in Interaction in Motion, Augmented Reality, and Visualization.

Projects

AIMMIT PROJECT

A collaboration between Volvo Cars, Semcon, Chalmers, and Viktoria Swedish ICT, the aim of the project is to explore the potential benefits of different multimodal interfaces for vehicles concepts for current and future vehicle functionality. The project focus is on developing a navigation interface in semi-autonomous cars as a means of reducing driver out-of-the-loop performance problems. A real working prototype is currently in development.

GESTURE BIKE

Examining projection surfaces and turn signal systems for urban cycling.

A 3 experiment study comparing Projection vs HUDs, Gestures vs Buttons, and Visibility of LEDs vs Projections.

Research focus on Safety (Visibility), Ease of Use.

Worked on Software, Prototyping, and Evaluation

Developed custom gesture tracking software using a Kinect Sensor

Published at ITS 2015 (2nd author).

SMOOTH TRANSITIONS

Medium and transition in mobile projected interfaces.

Presented a workshop paper related to gesture bike technologies.

Identified 2 types of transitions and their properties.

HOLO BEATS

Design and development of an augmented reality system to teach drums.
Focused on user research and designing for children with learning disabilities.
Used off the shelf technology: Google Cardboard, RFDuino, Unity, Vuforia.
Created a real working prototype and performed a pilot study which shows the system has promise as teaching tool.
Published at SIDeR 2016 Student Conference.

Education

2009 B.Sc, Computer Science Major, Simon Fraser University
2016 (Expected) M.Sc, Interaction Design Program, Applied IT Faculty, Chalmers University of Technology

Skills

Experiment design and facilitation
User Research methodologies
Unity game engine programming
Vuforia AR Framework for Unity
Hardware prototyping using Arduino
Experience with optical tracking systems, including Tobii eye trackers, OpenCV face tracking, and Microsoft Kinect sensors.
Programming with C++, Java, and Linux Scripting (BASH)
Web programming with PHP, MySQL, and JavaScript
Design with Photoshop ,Illustrator, and video editing with Premiere and After Effects

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