

# Armin Hadzic

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## Research Interests

Developing methods to integrate a sense of object permanence into computer vision systems using deep learning, reinforcement learning, and cognitive science. Merging traditional machine learning techniques with artificial intelligence in order to address challenges such as visual occlusion and obfuscation.

## Education

### University of Kentucky

*Bachelor of Science in Electrical Engineering, GPA – 3.75*  
Graduated Magna Cum Laude, Minor in Computer Science

2009–2013

### University of Kentucky

*Bachelor of Science in Computer Engineering, GPA – 3.8*  
Graduated Magna Cum Laude

2016

Dean's List Fall 2010 to Spring 2013.

## Publication

- [1] Weilian Song, Scott Workman, Armin Hadzic, et al. "FARSA: Fully Automated Roadway Safety Assessment". In: *2018 IEEE Winter Conference on Applications of Computer Vision (WACV)* (March 2018).

## Professional Experience

### Academia.....

#### Volunteer Machine Learning Research Assistant

2017–present

UK COMPUTER VISION LAB

Lexington, KY

- SUMMARY: Automating the US Road Assessment Program (usRAP) road safety assessment using a deep convolutional neural network to directly estimate roadway safety based on street-level panorama images, reducing evaluation time to milliseconds per image.
- Integrated the roadway safety estimator into a GPS vehicle routing system to enhance navigation with the capability to identify a balanced, safe and fast, driving route.

### Industry.....

#### Software Development Engineer

2017–Present

BELCAN ENGINEERING GROUP INC.

Lexington, KY

- Developed, maintained, and tested a jet engine diagnostic and fault resolution system, saving over \$100,000 by automating engine maintenance diagnostics.
- Integrated and streamlined a legacy cross-platform build system with modern development tools, mitigating build errors and reducing development time.

#### Embedded Software Engineer

2016-2017

BELCAN ENGINEERING GROUP INC.

Lexington, KY

- Streamlined the user interface and reduced diagnostic time of jet engines by identifying, isolating, and purging Onboard Maintenance System inefficiencies and defects.

#### Software Test Engineer

2015-2016

BELCAN ENGINEERING GROUP INC.

Lexington, KY

- Designed and implemented Control and Diagnostic System Verification and Validation Tests for 4 P&W Turbofan Jet Engines.
- Discovered mission critical control logic, software, and documentation defects through root-cause analysis, informal testing, regression testing and system testing; leading to best in class, safe, and high performance jet engines.

#### Founder and Software Developer

2015

CHANGING TABLE APP

Lexington, KY

- Developed an Android application to aid users in locating men's washrooms containing changing tables in order to alleviate the stress of searching for baby friendly environments.

- Software Engineering Co-op**  
TEMPUR SEALY INTERNATIONAL INC

**2013-2014**  
*Lexington, KY*

- Pioneered and developed a GUI and 3D topography mapping application to visually analyze 5,000 datapoint datasets, generating streamlined product testing, seamless user experience, and refined product quality.
- Software Engineering Intern**  
JOHNSON CONTROLS INC

**2012**  
*Florence, KY*

- Designed and implemented a software algorithm for streamlined Automated Guided Vehicle (AGV) routing, saving \$57,000 per year in scrap reduction and transportation costs.

**Technical skills**

Programming Languages	C/C++, Python, Verilog, Java, MIPS/IA32 Assembly, Make, $\LaTeX$
APIs/Libraries	Keras, Tensorflow, Scikit-Learn, Numpy
Operating Systems	Unix/Linux, Windows, Android
Development Environments	Linux Toolchain, Visual Studio, Jupyter, Android Studio, Xilinx