

# Armin Hadzic

☎ (859) 396-8870 • ✉ armin.hadzic@uky.edu • 🌐 www.arminhadzic.com • in armin-hadzic

## Research Interests

Developing **deep learning** methods to address challenges in visual ambiguity and occlusion from a single vantage point source using a continuous image stream. More generally, I am interested in **deep learning**, **computer vision**, **reinforcement learning**, **artificial intelligence**, and **robotics**.

## Education

### University of Kentucky

*Master of Science in Computer Science, GPA – 4.0*

2018-Present

Advised by Professor Nathan Jacobs

### University of Kentucky

*Bachelor of Science in Computer Engineering, GPA – 3.8*

2016

Graduated Magna Cum Laude

### University of Kentucky

*Bachelor of Science in Electrical Engineering, GPA – 3.8*

2009-2013

Graduated Magna Cum Laude, Minor in Computer Science

Dean's List Fall 2010 to Spring 2013.

## Publication

- [1] Weilian Song, Scott Workman, Armin Hadzic, Xu Zhang, Eric Green, Mei Chen, Reginald Souleyrette, and Nathan Jacobs. "FARSA: Fully Automated Roadway Safety Assessment". In: *2018 IEEE Winter Conference on Applications of Computer Vision (WACV)* (March 2018).

## Professional Experience

### Research.....

#### Research Assistant

2018-Present

UK COMPUTER VISION LAB

Lexington, KY

○ Advised by Professor Nathan Jacobs.

○ Developing Natural Language Processing (NLP) temporal convolutional and attention-based neural network models to estimate firm economic performance using public SEC text reports.

#### Volunteer Machine Learning Research Assistant

2017-2018

UK COMPUTER VISION LAB

Lexington, KY

○ Automated 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

2017-2018

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

2013-2014

TEMPUR SEALY INTERNATIONAL INC

Lexington, KY

- Pioneered and developed a GUI and 3D topography mapping application to visually analyze large datapoint datasets, generating streamlined product testing, seamless user experience, and refined product quality.

### Software Engineering Intern

2012

JOHNSON CONTROLS INC

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	PyTorch, Scikit-Learn, Numpy, Pandas, Keras, Tensorflow,
Operating Systems	Unix/Linux, Windows, Android
Development Environments	Linux Toolchain, Jupyter, Visual Studio, Android Studio, Xilinx