# Andrei Barbu

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Date of birth 04/07/1988
Nationality Romanian
Civil status Not married

## WORK EXPERIENCE

### Jan 2018 - present

### Systems and Safety Verification Lead

**McLaren Applied Technologies Ltd.,** *Chertsey Rd, Woking GU21 4YH, United Kingdom*

- Lead the systems and software verification activities for autonomous driving ECU
- Coordinate the development of methodologies and supporting documentation for ISO 26262
- Perform safety analyses (FTA, FMEA)
- Review and approve technical safety requirements, system and software requirements
- Develop MIL, SIL, PIL and HIL simulation environments and test automation
- Provide mentorship and support to verification engineers
- Progress tracking and reporting to senior management

### May 2017 - Jan 2018

### Hybrid and Electric Vehicle Controls Engineer

**Horiba Mira Ltd.,** *Watling St, Nuneaton CV10 0TU, United Kingdom*

- Model-based embedded software development for Hybrid Control Unit according to MAAB, MISRA-C and ISO26262 standards following DSDM Agile project management methodology
- Managing and implementation of system, software and component requirements
- Plant models and test harnesses development for hybrid and electric vehicles software
- White box and black box MIL, HIL and vehicle software validation and testing
- Writing test reports and supporting documentation for the Hybrid Control Unit

### April 2014 - May 2017

### Controls Systems Engineer - Engine Management

**Jaguar Land Rover Ltd.,** *Abbey Road, Coventry CV3 4LF United Kingdom*

- Design and validation of Engine Management System control strategies
- EMS Network Interface design and validation (FlexRay, CAN, LIN)
- Safety functions validation in accordance with ISO 26262 standard
- Defining and writing requirements and DV methods for EMS control strategies
- Liaising with the software and hardware suppliers covering the technical aspects of software deliveries in accordance with project's gateways and deadlines
- Root cause analysis (Fishbone diagram, 8D Problem solving), FMEA and Boundary Diagram analysis

### July 2012 - March 2014

### Calibration Engineer - Automatic Transmissions

**Renault Technologie Roumanie,** *1 Aviatorilor, 135500 Titu, Romania*

- Transmission control unit calibration (shift scheduling, shift quality, engine torque management)
- Integration and validation of new software
- TCM OBD thresholds calibration and chassis dynamometer tests (NEDC and FTP-75 driving cycles)
- Development of calibration documentation and test reports
- Support test trips in order to ensure proper engine / transmission operation in all operating conditions
- Extensive road and test track testing

### March 2012 - June 2012

### Engine calibration – Internship

**Renault Technologie Roumanie,** *1 Aviatorilor, 135500 Titu, Romania*

- Knowledge of ECU software architecture and control strategies
- Basic knowledge of Gasoline and Diesel engine calibration methods and calibrations management
- Data acquisition and interpretation of measured signals

## EDUCATION

**Sept. 2009 – July 2012**

### Project Management – Bachelor's Degree
***Academy of Economic Studies,** Piata Romana 6, 010374 Bucharest, Romania*

<u>Main subjects</u>: Project Management; Economics; Management of Human Resources; Business and Management Research; Statistics

**Sept. 2008 – May 2012**

### Automotive Engineering - Bachelor's Degree
**Polytechnic University of Bucharest**, *313 Independentei, 060042 Bucharest, Romania*

<u>Main subjects</u>: Vehicle electronics; Vehicle drivetrain; Vehicle dynamics; Mechatronics; Automated systems and microcontrollers; Numerical analysis; Statistics; C++ Programming.

**Sept. 2004 – June 2008**

### Mathematics and Computer Science – High School
***Nichita Stanescu,** 12 Lucretiu Patrascanu, 030507 Bucharest, Romania*
*Specialization: Informatics – intensive*

## RELEVANT EXPERIENCE

**July 2014 – present**

### Formula Student Design Judge – *Electric vehicles powertrain and electronics*
UK Silverstone 2014, 2016, 2017; Spain Circuit de Catalunya 2014, 2015

**November 2010**

### Project Management – *Specialization course*
*Schultz Business School, 8 Ronda Street, Bucharest, 024106*

**Sept 2009 – Dec 2009**

### Computer programming (*C++ language*) – *Specialization course*
*University of Bucharest, 4-12 Regina Elisabeta, 030018 Bucharest, Romania*

## PERSONAL SKILLS

**Foreign languages**

- English – fluent
- French – beginner

**Personal attributes**

- Extremely ambitious and self-motivated
- Initiative and problem solving skills
- Methodical and good team player
- Ability to remain focused under pressure
- Well-developed analytical skills – rigorous & pragmatic
- Leadership skills

**PC skills**

- Microsoft Office (Excel, Word, PowerPoint, Outlook, Project)
- Enterprise Architect
- C++, MATLAB (Simulink, Stateflow), Python, CAPL
- Vector CANalyzer, CANoe, vTESTstudio, vSignalyzer
- Vector DaVinci Developer/Configurator
- dSpace ControlDesk, AutomationDesk
- Lauterbach TRACE32 debugger
- ETAS INCA, MDA
- AVL CRETA, IBM Rational DOORS
- Git / GitHub / Git extensions
- Atlassian JIRA, Confluence, BitBucket
- Siemens Polarion ALM

**Other relevant skills**

- Agile Project Management (SCRUM, DSDM)
- AUTOSAR development
- Automotive SPICE
- ISO 26262

**Driving licence**

Cat. A, B (October 2006)

**Hobbies**

Track driving, Drifting, Hiking, Running