Armin Dajić, CV

Personal information:

Secondary address of living	<<Protected>>
Address of residence	<<Protected>>
Phone number	<<Protected>>
Email	adajic91@gmail.com
Date and place of birth	29.11.1991. Zenica
Citizenship	Bosnia and Herzegovina, Croatia

Education: Master of Electrical Engineering

Faculty, II cycle: Faculty of Electrical Engineering in Sarajevo, department for Automatic Control and Electronics	2013 - 2016 II study cycle with average grade 9.16. Acquired title „Master of Electrical Engineering“, department for Automatic Control and Electronics
Faculty, I cycle: Faculty of Electrical Engineering in Sarajevo, department for Automatic Control and Electronics	2010 - 2013 Acquired title „Bachelor of Electrical Engineering“, department for Automatic Control and Electronics
Secondary school: „First gymnasium“ in Zenica	2006 - 2010 One of the two students in generation who had all excellent marks at the end of each year
Primary school: „Edhem Mulabdić“ in Zenica	1998 - 2006 The best student of generation

Work experience:

Freelancer at websites: Upwork, Peopleperhour, Freelancer, Fiverr and others	Oct 2011 - ... Mostly tasks related to web development (PHP, Ruby on Rails, Node.js, Wordpress, Javascript, jQuery, HTML, CSS), Python scripts, web scraping using Selenium, .NET C# desktop apps, console apps, embedded systems, microcontrollers (Arduino, Mbed, Pixhawk) etc.
Undergraduate teaching assistant at the Faculty of Electrical Engineering in Sarajevo on subjects „Fundamentals of computing“ and „Programming techniques“ (C and C++)	Oct 2014 - Sep 2016 Homeworks testing and assisting in organization of laboratory exercises. The focus of the subject „Programming techniques“ was on object oriented programming, C++11 ISO standard.
Teaching assistant at the Faculty of Electrical Engineering in Sarajevo on subjects „Optimal control“ and „Intelligent control“ (Matlab, Python)	Oct 2016 - Mar 2018 Assisting in organization of laboratory exercises.
Team member of Science for Peace project „MORUS - Unmanned systems for maritime security and environmental monitoring“	Nov 2015 - Oct 2018 The main goal of the MORUS project is to design and produce a prototype of a fully operational robotic system comprised of an Unmanned Aerial Vehicle (UAV) and an Unmanned Underwater Vehicle (UUV). We worked on PX4 coding and on state machine.
Picolight dynamics LLC, part-time software developer	Jul 2017 - Feb 2018 Implementing ground station in C# to navigate drone and get data from sensors, loading path from SD card, implementing interface to receive commands and run daemon processes on PX4 NuttX, assembling the drone, testing etc.
NM Robotic GmbH/LLC, part-time flexible robotic engineer and software developer	May 2017 - Mar 2018 Working on Systems simulation tasks within the project 'Verify'. Generating ROS C++ code in Python based on ROS network diagrams in .NET C#. Implementing path planning algorithms in Matlab, etc.

QualityLine Production Technologies Ltd, full-time software developer	Feb 2019 - Jul 2019 I was working on C# projects related to data parsing, data collecting and analytics. I was fixing bugs, adding simple functionalities, working with windows services and MSSQL, maintaining a PHP website.
Kontrol GmbH, full-time software engineer and developer	Jan 2020 - Dec 2021 Automatic installer of ROS2 software environment (can do work over SSH), 3D visualization for simulators (autonomious vehicles: cars, drones) in Unreal Engine 4 (Blueprint, C++) with gRPC server, AirSim, Python, Matlab, FreeRTOS etc. Working on a framework for control automation (ROS, ROS2, mavlink v1, mavlink v2, Serial, UDP, gRPC etc) and creating custom apps in that framework.
Snap Creek Software, part-time software developer	Dec 2021 - Dec 2022 Working on some of the most popular Wordpress plugins available on the web.
Awesome Motive Inc., full-time software developer	Dec 2022 - Jun 2023 Working on some of the most popular Wordpress plugins available on the web.
Tasks Diary, part-time, founder and software engineer	Jun 2024 - ... Working on SaaS (software as a service), an activity manager that allows users to plan their tasks, organize them in categories, lead a diary, collaborate, generate reports and so much more...

Competitions:

1st place at the cantonal competition in computer science for secondary schools in 2010.
Multiple times participant of the national competition in computer science for secondary schools, and the cantonal competition in mathematics for secondary schools.
I had played tennis since I was 6, until I entered the faculty. Among other titles I won national championship for juniors under 18. During the studies I have not found enough time and space for sport (only recreation).

Tools and programming languages:

I often use my free time to program. Thanks to this hobby (since high school), freelancing projects and work at the university I gained experience in the development of quite wide range of apps, particularly using the following tools and environments:

PHP & MySQL, Ruby on Rails, Node.js, Javascript, jQuery, html & css, web scraping (Selenium with Python and C#, CasperJS, PhantomJS), Creating 2D and 3D games (Game Maker, Unreal Engine 4), Windows Forms Applications (Visual Studio C++/CLI, C#), C, C++, Python, Java.

In connection with electronics and automatics: Programming microcontrollers: assembler, C, C++ (PIC, Arduino, Mbed ARM, Raspberry Pi, Pixhawk PX4), ROS, VHDL and FPGA, Embedded systems with Ethernet, Radio, Serial, I2C, SPI communication, using tools like Labview, MultiSim, as well as Eagle and Proteus for PCB design, Design of automatic control systems, Matlab modeling (Simulink) & programming, Acquisition and Signal processing, Image recognition etc.

Links for some references and portfolio:
https://www.peopleperhour.com/freelancer/development-it/armin-dajic-software-developer-yqqwmxz
https://www.linkedin.com/in/armin-daji%C4%87-116263b1/
https://www.upwork.com/o/profiles/users/~0156acb38e88d55920/
https://www.researchgate.net/profile/Dajic_Armin

Some of the interesting projects that I have worked on so far:

- Octocopter (drone) - Mobile Robotics (mbed, Arduino, C#);
- BACHELOR THESIS – Design and development of a control module for a gas water heater. The module is accessible also from a website, via telnet protocol (Arduino, PHP);
- Semi-automatic control of a small robot on tracks in a maze (Arduino, C#, Xbee radio communication);
- Kalman filter, IMU10dof DF Robot - RT determination of orientation in 3D space (Matlab, C++);

https://www.youtube.com/watch?v=qkcXoBqLEzI (playing PC Balance Game using breadboard);
- Steganography of text (or some other data) into a .bmp image (in C);
- Identification of vehicles from bird's eye view, based on HOG descriptors (Matlab);
- Captcha protection solver based on matched filter and an algorithm for digits recognition (Matlab, C);
- Implementation of DLQR - control of discrete linear quadratic system (Python);
- EKG analyzer (detecting QRT complexes, P and T waves), animation of heart work based on data (C#);
- The application of the algorithm "Ant colony optimization" on the game Tetris (VS, C++/CLI);
- Web Cron servis - SMS/Email/Web notifier and reminder (Javascript, PHP);
- Universal battery and accumulator charger (LCD display, dsPIC microcontroller);
- Programming in pdf's Javascript and its connection to a database inside of a web application;
- MASTER THESIS - Realization of the optimal regulator for a vehicle with Ackermann steering; https://www.youtube.com/watch?v=dbALwSj4nHs, optimal parking and 3D Blender visualization;
- Speech recognition based recaptcha using IBM Watson api (PHP, Node.js);
- Wordpress plugin, video recorder which uploads recorded video to S3, Dropbox or Wordpress Media;
- 2D PC games: Super Mario (Game Maker), Winbrick (Game Maker), Snake (Turbo Pascal);
- XMPP Chatbot (C++). Executes commands like: kick, ban, mod etc. It can also chat by using Elbot;
- Automatic installer of ROS2 environment locally and via SSH (Python, C#);
- Multiple projects of automatic web scraping based on selenium lib (Python, C#) or CasperJS;
- Unreal Engine 4 project with gRPC server that does 3D visualization of data coming at runtime;
- Algorithm for triangulation of polygons by using “Ear clipping method” in C++
- https://amsfreelance.com docker container for automatic filling of editable pdfs, simplified filling of tax documents for freelancers in Bosnia
- Cameras system for safe leaving of a parking place and joining traffic: https://github.com/blackarrow20/parking_cameras_system
- Contributions to the University book “Uvod u programiranje - C i C++” for Faculty of electrical engineering in Sarajevo: https://www.uvoduprogramiranje.ba/zbirka-demo.pdf
- Project “FUTURE OF THE WORLD” and impressive unique revolutionary patents within it: https://github.com/blackarrow20/future_of_the_world
- “Tasks Diary” web service, SaaS (software as a service). It is an activity manager that allows users to plan their tasks, organize them in categories, lead a diary, collaborate, generate reports and so much more

Conferences:

- The 1st Conference of Medical and Biological Engineering in Bosnia and Herzegovina (CMBEBIH 2015), 13th to 15th March 2015 (in Sarajevo at International Burch University)
- The 1st IUS Graduate Conference, 21th to 22th May 2015 (in Sarajevo at International University of Sarajevo)

Attended:

- EECI Paris-Saclay, module M16 04-08 April 2016 „Distributed coordination of multi-agent systems“, by Wei Ren, University of California, Riverside, USA
- Breaking the Surface, 02-09 October 2016 in Biograd na Moru, training program which serves as a meeting place of experts and PhD students of marine control engineering, signal processing and the marine robotics application areas in various types of ocean science.

Fields of interest:

Computer science and Data analysis, Programming (Scripting, Web development, WinForms and Console apps), Embedded systems, Automatic control, Robotics, Systems simulation.

Additionally:

Foreign languages	English - active German - passive
Driving licence	B category