Krzysztof Nowak

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EDUCATION:

University of Technology in Rzeszow **2012 - recent**
BSc Automation and Robotics Engineering, 5.0 Expected
(equivalent of 1st class honours, planned graduation in February 2016)
Selected Course Modules and achieved grades:

Automatic Regulation: A
Distributed Automation Systems: B+
Continuous Processes Control: A
Programming in C, C#: B+
Basics of Robotics: A
Automation of Electrical Drives: A
Artificial Intelligence in Regulation: B+
Programming PLCs and PAC drivers: B+
Microcontrollers Programming: B+
SQL Databases: A
English: A

Dissertation: "*Connection maintenance in SCADA systems of varied producers".* The aim of the project is to diagnose communication between operator stations of process' visualization system using internal parameters and variables. SCADA software planned to be used: *Wonderware InTouch, SCADA/HMI Promotic, Proficy HMI/SCADA iFix, Control Maestro, Wonderware Indusoft.*

Ropczyce High School **2009-2012**
Matura Exam results (final exam):

Extended Math: 72%
Math: 94%
Extended English(B2/C1 level): 83%
English (B1 level): 100%

PROJECTS:

Group projects:

- **Laser printer of PCBs based on XY-axis plotter**. It allows to create PCBs using photo-chemic method with 420nm laser. My task was to create conceptual model of the device in ***Adobe Inventor 2014*** and to write in ***Microsoft .Net Visual Studio 2013*** **C#** application that supports the printer and **SQL** database, which store PCBs projects. What is more I attended in mounting and calibrating the device.
- **XY-axis plotter** using DC servos, ball screw linear actuators, *MicroDAC* fast prototyping system (based on ***MatLab 2013 Simulink*** *library*). My job was to create PCB board to supply and control limit switches and also to create ***Simulink*** object control model.

Individual projects:

- **Inverted pendulum regulation.** I had used fast-prototyping system based on ***Matlab2013 Simulink*** library. The pendulum was placed on ball screw linear actuator driven by DC servo. I had successfully identified object's parameters needed to be regulated and designed LQR regulator which was keeping the pendulum in vertical position.

CERTIFICATION:

- Microsoft IT Academy Programme certificate: *Developing* ***Microsoft .NET*** *Applications for* ***Windows® (Visual C# .NET)****, Rzeszow 01.2015*
- DM Systems Learning Centre certificate: 3D *CAD modeling in* ***NX 9.0****, Rzeszow 12.2014*

TECHNICAL SKILLS:

- **PLC programming:** Wide experience in programming PLCs. Developed numerous projects including combinational, sequential and time determined, on ***Beckhoff***, ***GE Fanuc, ABB*** and ***Siemens*** controllers in ***TwinCAT 2, Proficy Machine Edition, Freelance*** and ***TIAPortal***

environments. Knowledge of ***IEC 61131-3* standard** and most of programming languages which it defines (**ST**, **LD**, **IL**, **FBD**) and also Siemens' **LAD** and **SCL**.

- **Objected oriented programming:** Knowledge of programming in **C#, C++** using ***Eclipse, Code::Blocks, Microsoft Visual Studio 2005, 2008, 2013***.
- **Microcontrollers programming:** Familiarity with ***Atmel ATmega*** microcontrollers implementing PWM, interrupts, UART, ADC and DAC. All programs written in **C** using ***WinAVR***.
- **Electrical devices:** Good knowledge of electronic components used in automation.
- **Electrical circuits designing:** Knowledge in designing electrical schemes and PCBs using ***Eagle 6.4.0*** software and also inspecting them with measuring instruments.
- **3D modeling:** Experience in 3D CAD modeling and model analysis using ***NX 9.0*** and ***Adobe Inventor 2014***.
- **Designing linear regulators:** Advanced level skills in identifying object parameters (according to theirs step response charts), designing regulators and calculating how to tune them to provide efficient object regulation. Including P, PI, PD, PID, PPI, LQR regulators. Implemented in ***MatLab/Simulink***, **C** applications.
- **SQL databases:** Basics of **SQL**, which allows to create databases, explore them and analyze data. Working on ***Microsoft SQL Server 2008, SQL Developer Express Edition 11g.***
- **Others:** ***Windows XP, 7, 8, Microsoft Office 2007, 2010 (Word, Excel, PowerPoint, Access), Adobe Photoshop CS6, DASYLab 11, NI Multisim 11*.**

WORK EXPERIENCE:

- **Summer Placement, BARION Strzałka, Niedźwiada, Poland** **July - September 2014**
  - Designing PCBs using *Eagle 6.4.0* software.
  - Soldering elements and repairing broken devices.
  - Realizing own projects and working on improvement of existing ones.
  - Contacting with customers from whole world and providing feedback.
- **Seasonal Job as Factory Operative in Dundee Cold Stores, Scotland** **Summer 2012, 2013**
  - Inspecting factory machines and preventing breakdowns.
  - Repairing small machines malfunctions on my own.
  - Frequently communicating with local technical stuff to provide continuous product flow.
  - Organizing job for groups of other factory workers.
  - Planning all aspects of travel to Scotland, living and working there.

OTHER SKILLS:

- Very good knowledge of both written and spoken English
- Basic knowledge of German
- Basic knowledge of Russian
- Quick learner
- Highly motivated and creative
- Well-developed skills of analytical and critical thinking
- Communicative, friendly and with positive attitude
- Punctual and focused
- Valid B-category driving license and passport

PERSONAL DETAILS:

Date of Birth: 12.07.1993
Nationality: Polish
Marital status: Single

HOBBYS:

Running
Playing chess and guitar

REFERENCES:

Available upon request.