

## Personal information

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Date of birth 23.10.1984

## Work experience

since 07.2007 **Software Development Engineer** – development for international company, Bluemetrix, Ireland  
Key responsibilities

- development and implementation of new modules and features for existing and new products
- contract software development work for clients

12.2006 – 07.2007 **Freelancer** – web and software development for private customers  
Key responsibilities

- installation of various network devices, trouble-shooting issues, maintenance of small, local networks

10.2006 – 03.2007 **WiFi installer** – WiFi installation and configuration, *MikoNET*, Poland  
Key responsibilities

- contract web development work for clients

## Education and training

2003 – 2007 Title of qualification awarded: IT Engineer; Occupational skills covered: The Faculty of Science, IT; Kazimierz Wielki University in Bydgoszcz, Poland  
1999 – 2003 Principal subjects: Extended curriculum in IT; Secondary School No. 8 in Bydgoszcz

## Details of major academic and freelance projects

Project name	<b><u>Visualization porous materials</u></b>
Technologies	<i>C++, OPENGL, Code::Blocks IDE, Linux</i>
Description	Project written in Code::Blocks IDE under Linux system. Very demanding task, related with my engineering diploma. Diploma theses reads: "Generating of three-dimensional porous (granulated) material with fixed medium location of pores. Visualization in OpenGL." It's is very portable tool thanks to C++ (objective), OpenGL and SDL. Main goal was create program which makes three-dimensional model of specified porous material and shows their structure. Pores position is calculated by physical engine, which realize collisions between them. User can type data for pores generator or define others parameters such as material size.
Project name	<b><u>3D graphics engine</u></b>
Technologies	<i>C++, OPENGL, Microsoft Visual Studio, Code::Blocks IDE, Linux</i>
Description	Program loads all necessary data from files (configuration, textures and models). Application creates 3D landscape covered with texture and puts there some simple objects. User can move these objects using his mouse. Also he can change illuminance, fog density, position of camera and other parameters using keyboard. I was responsible for all aspects of programming: implementation classes and

functions, making graphic (textures), searching and fixing bugs, writing help and project's documentation.

Project name	<b><u>Simulation of sedimentation process</u></b>
Technologies	<i>C++, Borland C++ Builder</i>
Description	A windows application evaluating final sedimentation velocity of particles. All code written in C++, GUI based on Visual Component Library (VCL). User can enter some parameters (using standard components like "ComboBox", "Edit", etc...): diameter of particles, material type (fine sand, coarse sand, quartz sand and others), finally user chooses water temperature (water density and adhesion depends on it). Programme calculates final velocity and makes chart (dependence - temperature/velocity).
Project name	<b><u>RSA implementation</u></b>
Technologies	<i>C++, Borland C++ Builder</i>
Description	Project realising cryptographic algorithm. Programme allows encrypt and decrypt short words using RSA algorithm. User can also try to crack a code and see how much time it took. Implemented two attacks on RSA - Euler function and factorization attack. I was responsible for implementation algorithm and making GUI (based on VCL).
Project name	<b><u>Numerical methods - Lagrange interpolating polynomial</u></b>
Technologies	<i>C++, Borland C++ Builder</i>
Description	Implementation of interpolating algorithm. User enters indispensably data through simple interface (for example: coordinates for some points). Program is trying to find a best continuous function getting by these points. Application also allows carry out approximation based on entered points and makes charts. Interface based on VCL (components: StringGrid, Edit, Image, Button...).
Project name	<b><u>Fuzzy arithmetic calculator</u></b>
Technologies	<i>C++, Borland C++ Builder</i>
Description	Special calculator realizing fuzzy arithmetic operations: addition, subtraction, increasing, dividing (fuzzy numbers) and product and amount (fuzzy classes). User enters required data through simple interface (4 coordinates for both fuzzy numeric or classes - A and B) and program evaluates C (result of selected operation) and makes a chart. Interface based on VCL (components: Edit, Memo, Image, Button, RadioButton).
Project name	<b><u>Administration panel</u></b>
Technologies	<i>PHP, MySQL</i>
Description	Administration panel used to remote control of firewall (running simple shell scripts - using iptables - and in this way opening or closing appropriate ports). Scripts was implemented with security in mind: enforcing connection via HTTPS protocol; passwords are stored as 40-bits SHA hashes; "weak" passwords are not acceptable (filtered by regular expression); panel is "Cross Site Scripting" invulnerable (SQL Injection i HTML Injection); filtering data by regular expression; using enhanced sessions mechanism; limited time - automatic log out after 2 minutes (default) of inactivity; MySQL database.
Project name	<b><u>Internet Topology Generator</u></b>
Technologies	<i>PHP, SVG</i>
Description	PHP scripts using BRITE (Boston university Representative Internet Topology generator), java tool generating data for Internet topology visualization (SVG). All data created with the aid of BRITE (nodes coordinates, connections between them, etc...) was stored in MySQL database.

Project name **Universal databases visualizator**  
Technologies *PHP, HTML, SVG*  
Description PHP scripts used to display databases. Visualization in HTML (CSS) and SVG.

Project name **Telescope 3D model**  
Technologies *SolidWorks (CAD)*  
Description Three-dimensional telescope model designed in SolidWorks. Quite complicated construction composed of many movable parts. I was responsible for modeling particular elements, putting them together, assembling more complicated parts.

## Languages

Polish Mother Tongue  
English Communicative  
German Basic

## Social skills and competences

I have worked in various types of teams during my studies and in my further career. I am highly motivated, working always with excellent attention to details. Summarizing, I find myself as a sociable person who can communicate with other people in various situations.

## Personal skills

Very well organized, ambitious, creative, flexible, good team worker, sociable, reliable, honest, good attitude to customers.

## Computer skills and competences

### Software development:

- C/C++ - very good, also Boost and STL
- Pascal - good
- Python - basic
- Agile software development methodology - good

### Web Development:

- PHP - very good, also PEAR
- OpenLaszlo - very good
- JavaScript - very good
- HTML, CSS - very good
- SQL - good
- XML (XMLSchema, XQuery, XPath) - good
- SEO technics and media streaming/measurement - good
- Macromedia Flash - medium
- Django - medium

### Operating systems:

- Linux / BSD / UNIX - primary
- MS Windows - secondary

### Database systems:

- Good knowledge of MySQL, PostgreSQL and MS Access

### Network:

- Good knowledge of network protocols, LAN, Wireless and Internet. Upgrade, installation and configuration network services on UNIX platforms.

### Graphics:

- Good skills in manipulating images in Adobe Photoshop, Gimp, CorelDraw or InkScape. Also I am familiar with "programming" 2D/3D graphics in OpenGL (also with SDL lib), various file formats and graphics standards.

**CAD:**

- Some skills gained in AutoCAD and SolidWorks software.

**Other skills:**

- Solid knowledge of DTP standards – LaTeX, understanding of UML documentation standard, some skills in Matlab and his scripting language.

**Driving licence**

Full Driving Licence