

CURRICULUM VITAE – Gabriel Neculai

Personal information

Full name	Gabriel N. Neculai
Birth date	23.02.1990
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Education

Bachelor of Science

October 2009 – Expected 2013

POLITEHNICA University of Bucharest
Faculty of Automatic Control and Computer Science
Computer Science Department

Baccalaureate Diploma, High School Diploma

September 2005 – July 2009

„Bogdan Petriceicu Hasdeu” National College, Buzau, Buzau District
Specialization: Mathematics – Computer Science, Computer Science
intensive
Graduated with a baccalaureate diploma of 9.75 / 10.00

Work experience

04.07.2011 – 01.12.2012

Employer: SC AZOTH SRL, Bucharest

Position: Software Engineer (full-time)

Activities: I took part in the development of the TruePath Wireless project, which was intended to be a management system for devices

located in the range of wireless providers. The tasks which I performed where related to the system's interface (I worked in JavaScript, ExtJS framework) and to the client-server communication.

Acquired knowledge:

- Databases (analysis, normalization, SQL etc)
- Object Oriented Programming (Java)
- Interface design and usability

Reference:

Abdula Ervin, Senior Software Engineer (ervin.abdula@gmail.com)

Knowledge and abilities

Computer skills:

Programming languages:

- Java (theory: intermediate, practice: advanced)
- C (theory: intermediate, practice: advanced)
- C++ (theory: intermediate, practice: intermediate)
- SQL (theory: intermediate, practice: intermediate)
- PHP (theory: basic, practice: intermediate)
- Python (theory: intermediate, practice: intermediate)
- JavaScript (theory: basic, practice: intermediate)
- Scheme (theory: intermediate, practice: intermediate)
- Prolog (theory: intermediate, practice: intermediate)
- Clips (theory: intermediate, practice: intermediate)

Numerical computing:

- Matlab/Octave (theory: basic, practice: intermediate)

Operating systems:

- Windows (theory: intermediate, practice: intermediate)
- Linux (theory: intermediate, practice: intermediate)

Other technologies

- OpenGL (theory: intermediate, practice: intermediate)
- OpenMP (theory: intermediate, practice: intermediate)
- OpenMPI (theory: intermediate, practice: intermediate)

Foreign languages:

- English (writing: experienced, speaking: experienced)
- French (writing: beginner, speaking: beginner)

Other knowledge and abilities:

- Teamwork (intermediate)
- Problem solving (intermediate)
- Negotiation (intermediate)

Pair programming (intermediate, one month experience, July - August 2011)

School projects

Space Escape v2 – 11.12.2011 – 08.01.2012

The project presumed designing and implementing a game with a 3d engine, using OpenGL, which included object picking and moving mechanisms, a collision detection system.

The game consisted in moving a space ship through an asteroid field. The ship had a shield that on impact with an asteroid lost power (becoming more transparent), a tractor beam and a laser.

The game offered 3 camera views:

- 'asteroid' – from a selected asteroid (the camera moved in sync with the asteroid),
- 'ship' – from inside the ship (the camera moved in sync with the ship),
- 'dynamic' – from outside the ship (the camera position could be changed using the keyboard controls).

The project received maximum score and bonus for the unique design of the game elements, for implementing of additional game play elements (powerups, tractor beam) and for the additional animations (asteroid fragmentation).

Space Escape – 27.11.2011 – 11.12.2011

The project presumed designing and implementing a game with a 3d engine, using OpenGL, which included object picking and moving mechanisms, a collision detection system.

The game consisted in escaping with a space ship from an area filled with enemy ships. In fulfilling this task the hero had to fire at a satellite, which exploded creating a temporary black hole which destroyed enemy ships.

The project received maximum score and bonus for the unique design of the game elements, generating several enemy waves and for the additional animations

Lines – 23.10.2011 – 06.11.2011

The project presumed designing and implementing a 2d game using Java Applet.

The game consisted in aligning 5 or more pieces on a line, column or a diagonal, inside a 9 by 9 board. By aligning the pieces they would disappear and the score would increment accordingly to their number. Any other move created 3 new randomly positioned pieces on the board. The game ended when no moves could be performed.

The project received maximum score and bonus for implementing a game mode (difficulty, new graphical elements) interchanging system and an algorithm for moving the pieces in a fluent mode.

Backgammon – 03.03.2012 – 24.03.2012

The project presumed creating an AI for a backgammon player.

The algorithm implementation was based on expectimax algorithm.

The AI succeeded in defeating the AI offered by the assistant's team at the highest difficulty level.

Augmented Reality – 12.06.2012 – Expected 12.08.2012

The project presumes creating an application that augments the everyday reality by adding visual elements to the environment when viewed through a camera, for mobile phones with Android operating system.

The project is currently under development.

Hobbies

Pc games (all genres)

Sports – jogging, football, bike riding

Origami

Movies and TV series (fantasy, sci-fi, action, psychological)

Interests

Game designing and development

Mobile applications designing and development

AI integration in systems

Video rendering