Curriculum Vitae

Personal Information

Full name: Voicu-Mihai Hodrea
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Education history
- 2008-2012, The Technical University of Cluj-Napoca, Computer Science Faculty
- 2006-2008, Tiberiu Popoviciu Informatics Highschool, Cluj-Napoca
- 2004-2006, Nicolae Balcescu Theoretical Highschool, Cluj-Napoca
- 1996-2004, Constantin Brancusi General School, Cluj-Napoca

Employment history
- 2012-2014, Agilio Software as Software Engineer
- 2010-2012, Bitdefender as Malware Researcher and Software Engineer

Projects I've worked on at Agilio
- An HD capable video streaming library for Android that uses hardware acceleration – role: main developer. The library is developed in Java and in C++ using ffmpeg.
- A medical school study site – role: model and the API designer and main backend developer. The site backend is built using Symfony and Doctrine.
- Secret sharing data storage system. Role in project – revamped the communication protocol and improved the multithreading system, secured the connection with proper two-way authentication and built the data backend in python and C++ (the majority of the code is done in Java)
- Slot machine – role:
    - creating a mathematical model for the slot machine expected winning (return rate).
    - using the mathematical model create a (GUI) program that allows designing a slot machine game.
    - main game code – written in python using PyQt and OpenGL with postgresql as data storage
    - designing the circuitry and mechanical components
    - writing the firmware code (C++ on the arduino platform)
    - setting up the system's (Linux) security and startup sequence

Project I've worked on at Bitdefender
- An internal system that gathers data from hundreds of millions of files and indexes the data in such a way that allows searching by many criteria. Role:
    - creating many of the processors that gather data from files
    - creating APIs and multiple interfaces that allow for searching and retrieval of data from the database
- A system for comparing executables by disassembling and normalizing machine code and then comparing only the relevant pieces of code. Role:
    - implementing the x64 machine code disassembler and normalizer

- various data gatherers and processors for executable files
- implements parts of the backend which handles the comparison and gives the clean/infected verdict on a given sample

Skills
- I'm good at problem solving and I have good analytical skills
- I'm a fast learner and I adapt quickly to different project and environments
- I am fluent in C++, python, Java, scala, Postgresql, assembly and PHP
- I've worked with a multitude of frameworks and systems:
    - Qt, OpenGL, web frontend (javascript, html, css with jquery and others)
    - twisted, cherrypy, Play Framework, netty, Symfony
    - Postgresql, elasticsearch, MySQL, Doctrine
- I am comfortable with working in both Windows and Linux environments
- I am fluent in English and have basic French skills

Notable achievements during school
- 2006, 2007, first and second place respectively in the Cluj county informatics olympiad
- 2005, third prize at the National Astronomy Olympiad
- 2004, third prize and Internation Astronomy Olympaid, first prize at the National Astronomy Olympiad
- 2000-2004, various prizes at local and national olympiads in mathematics and physics