Victor Adrian Prisacariu

SUMMARY:
- Research student, reading for a DPhil in Engineering Science, at the Department of Engineering Science, University of Oxford, under the supervision of Dr. Ian Reid.

EDUCATION:
- "Gh. Asachi" Technical University Iasi, Romania, Faculty of Automatic Control   and Computer Engineering, Department of Computer Engineering 2003 – 2008.
  1st **university year 2003 – 2004:** average 9.56/10, in the first 3% of students;
  2nd **university year 2004 – 2005**: average 9.9/10, the first in the faculty
  3rd **university year 2005 – 2006**: average 10/10, the first in the faculty
  4th **university year 2006 – 2007**: average 9.95/10, the first in the faculty
  5th **university year 2007 – 2008**: average 10/10, the first in the faculty
  Total average for the 5 years is 9.86 - equivalent to 3.941 GPA – equivalent to A Level.
  Diploma exam grade: 9.83/10.
  Graduated one of three Heads of Promotion

- "Garabet Ibraileanu" High school, Iasi, Romania from 1999 to 2003. Graduated high school in 2003 with honours.

- Microsoft Certifications:
  - 70-536: Microsoft .NET Framework 2.0 – Application Development Foundation
  - Currently studying for 70-526: Microsoft .NET Framework 2.0 – Windows-Based Client Development and 70-528: Microsoft .NET Framework 2.0 – Application Development Foundation

EXPERIENCE:
- **Lightning Fish Games Consultancy**
  I was hired as a consultant on computer vision for two games developed by Lightning Fish Games Ltd. As part of my consultancy I implemented and provided expert advice of low-level computer vision algorithms for person detection, figure/ground segmentation, distance transforms and methods for extracting body part locations suitable for quantitative assessment relative to ideal poses.

- **Socrates Grant**
  I spent 3 months as an exchange student, part of the Socrates/Erasmus programme, at the Hochschule Konstanz, Konstanz, Germany, developing my Bachelor Thesis.

- **Microsoft Student Partner Team Lead**
  Microsoft Student Partner 2005 – 2009. Microsoft Student Partner Team Lead 2007 – 2008.
  I have taught a 3 semester course in C# programming at the "Gh. Asachi" Technical University, Iasi, Romania. I also held various presentations about Microsoft technologies.

- **Code40 SummerSchool 2007**
  Summer School is a Code40 academic initiative in which 20 students have been invited to work for 40 days on a real software system, for a real client, under the supervision and with the assistance of a senior developer from Code40. SummerSchool 2007 has the support of UNESCO, Maxcode & Code40, Delft Technical University Netherlands, Al. I. Cuza University, Romania and Microsoft Romania. I implemented two payment protocols and I was responsible with all the security of the application (user/network authentication, bank authentication, encrypted money transfer).

- **Various school related projects involving C++, .NET and Java programming**

- o I developed a spreadsheet application. It allows the use of more 130 built mathematical functions and it a scripting language for developing new ones. It also allows the plotting of graphs. It is able to import Excel and OpenOffice Calc files.
- o I developed a FAT16/32 driver for the PIC18f and the Freescale HCS12 MCUs. This was part of a 3-student team project where we designed and build a hard disk based mp3 player.
- o Using a pressure sensor I built a heartbeat and respiration rate monitor. The data was acquired from the sensor, sent wirelessly to a computer where it was analyzed by Matlab which separated the heartbeat and respiration rate and plotted them. This project was part of the 13 International Contest Hard & Soft, Suceava, Romania, 2006. The entire software and hardware needed to be designed and built in 3 days.
- o At the International Contest Hard & Soft, 14th edition, Suceava, Romania, 2007, I have used an Analog Devices Blackfin BF533 DSP for modifying human voice in real time (modifying the pitch and adding echo). Also, by using an accelerometer I have been able to generate sounds and video images based on the motion of the hand. The entire software and hardware needed to be designed and built in 3 days.
- o I have designed a peer to peer application which runs on a multitude of platforms and environments (Windows, Mac OS X, Linux and Windows Mobile). It offers devices the possibility of sharing resources in a network. Each device provided one or more services (i.e. a telephone offering a SMS sending service or a Mac OS X Server being connected to a grid) which, by means of my application, can be accessed from all the devices in the local network. A practical use of the application was the ability to compile and execute MPI code on a Mac OS X grid from a pocket pc.
- o My diploma project consisted of a computer vision based chess game. A webcam and image processing algorithms were used to understand the movements made by a human player on a chess board. The image captured from the webcam was augmented with 3D graphics, representing the positions of the pieces on the table, and displayed on the screen of the computer. The application also offered a multiplayer capability. The application was developed using Microsoft .NET framework, version 3.5, was written in C#, C++ and Matlab and used technologies such as WPF (Windows Presentation Foundation) and WCF (Windows Communication Foundation).

SKILLS:
- **Programming languages:**
  - o **C/C++ –** expert level
  - o **Delphi –** expert level
  - o **C# –** expert level – Microsoft Certified Professional
  - o **Java –** expert level
  - o **SQL** – advanced level
  - o **Also used: Perl, Objective C**
- **Technologies:**
  - o .NET Desktop, Distributed and Web Applications
  - o Java Applications
  - o OpenGL, DirectX
  - o MPI, CUDA
- **Database Systems:** Microsoft SQL Server, Oracle
- **Web Servers:** Internet Information Services, Apache
- **Operating Systems:** Windows Server, Windows, MacOS, Linux, FreeBSD, Darwin, Solaris, NetWare, QNX.
- **Scientific Applications:** Matlab, Labview, Optimas, LabWindows/CVI
- **Inference Engines:** Prolog, Clips
- **Development Tools:** Visual Studio, Eclipse, NetBeams, Delphi, Xcode, CodeWarrior Development Studio
- **Development Tools (Embedded Applications):** Microchip MPLAB, Analog Devices VisualDSP++, CodeWarrior Development Studio for Freescale MCUs, Texas Instruments Code Composer.
- **Developed software for the following MCU/DSPs:**
  - o Microchip PIC16/18

- Freescale HCS08/12
- Texas Instruments MSP430
- Analog Devices Blackfin BF533

HONORS, AWARDS:
- Awarded, by competition, a 3-year British PHD Scholarship (EPSRC Doctoral Training Accounts) at the University of Oxford to read for a DPhil in Engineering Science, with the title "Human Motion Understanding", under the supervision of Dr. Ian Reid, University Lecturer in Engineering Science at the Engineering Science Department, University of Oxford.
- Awarded a 3-year Domus PHD Studentship, by competition, by the Balliol College, University of Oxford.
- Awarded Socrates Grant by the "Gh. Asachi" Technical University, Iasi, at the Hochschule Konstanz, Konstanz, Germany, year 2008
- Awarded conference grant by Balliol College to attend the 20th International Conference on Pattern Recognition, Istanbul, 2010.
- Awarded conference grant by the Department of Engineering Science, University of Oxford, to attend the 21st British Machine Vision Conference, London, 2010.
- Awarded conference grant, by Microsoft, to attend Microsoft TechEd Developers Meeting 05-09 November 2007, Barcelona, Spain
- International Contest Hard & Soft, 14 edition, Suceava, Romania, 2007 4th prize; also I was awarded the individual award for "The best software programmer and team leader".
- International Contest Hard & Soft, 13 edition, Suceava, Romania, 2006 3rd prize.
- Microsoft Romania Boot Camp 2007 "Demo This!" competition, 1st prize.
- ACM South-eastern Europe Programming Contest, Bucharest, mention, 2005
- ACM South-eastern Europe Programming Contest, Bucharest, mention, 2006
- Romanian Award for Spoken English Contest, 1st prize, 2003
- Romanian Award for Spoken English Contest, 1st prize, 2002
- Romanian Award for Spoken English Contest, 2nd prize, 2001
  Excellent command of English Language – Toefl Internet-based Test score 115/120.
- "Stefan Procopiu" Romanian Award in Physics, 1st prize 2000
- "Stefan Procopiu" Romanian Award in Physics, 1st prize 2001

PUBLICATIONS:
- **Number of papers: 12**

RECENT PUBLICATIONS (including submissions):
1. <u>Victor Adrian Prisacariu</u>, Ian Reid – *"PWP3D: Real-time segmentation and tracking of 3D objects"*, 20th British Machine Vision Conference, London, 2009
2. <u>Victor Adrian Prisacariu</u>, Ian Reid – "*fastHOG - a real-time GPU implementation of HOG*", accepted for publication at the 6th International Symposium on Visual Computing, Las Vegas, 2009 and Technical Report 2310/09 Department of Engineering Science, Oxford University
3. <u>Victor Adrian Prisacariu</u>, Radu Timofte, Karen Zimmermann, Ian Reid, Luc Van Gool – "*Integrating Object Detection with 3D Tracking Towards a Better Driver Assistance System*", the 20th International Conference on Pattern Recognition, Istanbul, 2010
4. <u>Victor Adrian Prisacariu</u>, Ian Reid - *"PWP3D: Real-time segmentation and tracking of 3D objects",* submitted to the International Journal of Computer Vision
5. <u>Victor Adrian Prisacariu</u>, Radu Timofte, Ian Reid, Luc Van Gool – "*Combining Traffic Sign Detection with 3D Tracking Towards Better Driver Assistance*", invited book chapter for the book Emerging Topics on Computer Vision and its Applications, currently in course of submission.