# Marius Predut

| Jun 9, 2020 | Bucharest | 41 years | Male |

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🐝 https://www.bestjobs.eu/en/cv/5aa23c098bd6f

in https://www.linkedin.com/in/marius-predut-8b509b16/
⌗ https://github.com/mpredut
🌐 http://imageprocessing.ro/

## About me

- ✅ I have a driving licence
- ✅ Available for relocation
- ✅ Interested in part time offers / projects
- ✅ Available for business trips

## Spoken languages

**English**
**Advanced**

## Professional experience

### Software Engineer

**INTEL Corporation** (/en/companies/intel-corporation) in Bucharest, Romania
1 year 10 months · May, 2018 - March, 2020

Intel contractor on Arm aarch64 by EasyIC.
1. Firmware Micro kernel and boot-loader - software architecture coding and design.
- Exception and interrupt handling - boot loader/vector table and exception management
- moving between exception levels(least privileged or most privileged) and drives interrupts into expected secure or non secure state
- context management for nested exception/interrupts chain between privileged secure and non secure
2 . owner on Arm GICv3 component - design code on interrupts controller system.
- assembly and c/c++ coding.
- arm test cases and Intel sock IP test cases

### Computer Vision Engineer

**self-employment** in Bucharest, Romania
1 year 2 months · March, 2017 - May, 2018

Algorithms development
* Trademark search on a huge image database
* Image Enhancements for better OCRresults
* improvements on cryptocurrency mining software on power and speed

Keywords: Image descriptors, Feature detection(SIFT, SURF), Hu Moments, Invariant Feature Transforms, Decision trees , Bayes ,regressions, k-NN, Stochastic Gradient descent, Adaptive Boosting .

Prototyping and patent granted for an Electric vehicle :
Check on " https://worldwide .espacenet. com"

Languages/Tools: C/C++/Python/C# Linux tools/Windows tools

## Graphics Software Engineer

**INTEL Corporation** (/en/companies/intel-corporation) in Bucharest, Romania

3 years 10 months · March, 2013 - January, 2017

Google chromium project (Chrome browser and ChromeOS) focused on graphics stack.
- Patent submission on speed up delivery of the worker pool rendering jobs to the GPU against the state of the art graph tasks design pattern.
- Intel graphics open source drivers (OPEN GL, GLES, EGL 3D mesa/drm/dri drivers). Linux kernel/driver debugging.
- Play with anti-aliasing algorithms (CMAA), porting from DirectX to OpenGL
- Android graphics stack optimisation for Intel harware (hardware composer driver, - VSYNC).

## Software Engineer

**IBM ROMANIA SRL** (/en/companies/ibm-romania-2) in Bucharest, Romania

5 months · October, 2012 - March, 2013

- Linux embedded on IBM Blade Servers. I inserted a new feature that enable adding/removing blades on running system.

Languages/Tools: C/C++/Linux tools

## Software Engineer in Bioinformatics

**SIEMENS PSE SRL** (/en/companies/siemens-pse) in Brașov, Romania

10 months · December, 2011 - October, 2012

My role here was research and development on sequencing similarity searching algorithms used on DNA alignment to :
* optimise process flow in terms of speed and resources
* play with searching and compressing : Prefix Trie, Suffix array, Burrows–Wheeler transform, etc.
* working with huge data, parallel processing and cross platform development.

Languages/Tools: C/C++/Python/Java/Linux/windows tools

## Contractor Software Developer Engineer

**Texas instruments** in Nice, France

6 months · April, 2011 - October, 2011

Algorithm and Design Verification on Omap5 hw.
* Silicon validation on OMAP5 architecture
* Algorithms validation on Image subsystem(ISS) and Still Image COProcessor (SIMCOP)
* Used I2C, and CSI2 interfaces.

Networking and math for other Remote projects
* unmanned air vehicle simulator, unobtrusive
* email spammer.. J

Languages/Tools: C/C++/FPGA and DSP tools

## Computer Vision - Team Lead

**Intel Corporation** (/en/companies/intel-corporation) in Timișoara, Romania

7 months · August, 2010 - March, 2011

* Research and Embedded development
Researcher and developer in Computer Vision on embaded hw.
Lead a team of 4 members.
The prototypes (models) that have been proved on PC are implemented on embedded device ( ARM with DSP/ISP).
Achievements:
Given images (a pair) taken from two cameras at points A and B, with parallel axes, where we know the approximate distances between the two cameras.
1. Find a kind of solution for detect angle and zoom for a pair of images for optimal matching of them - Patent submitted.
2. Produce a new virtual image that is taken from a camera located on a line between A and B.
3. Analyze a better solution for color correction/calibration in video stream.
The keywords of projects are: , clustering, k-means, k-nearest neighbor, Stereo alignment, template matching; stereoscopic view; epipolar geometry, sparse and deep mapping, affine transform, Harris corner detector, color transfer – Reinhard algorithm

Languages/Tools:, C/C++/Python/Linux Embedded and windows tools

## Contractor Software Developer Engineer

**LMS Brasov, Payzone** in Bucharest, Romania

1 year 7 months · January, 2009 - August, 2010

* Linux Server and embedded development
1. POS Terminal simulator for loading electronic bill payment and mobile cards - Embedded and Server side development .
2. Update transaction server for electronic bills payment.
3. Pins migration application for 40 mobile operators.
It involve notions of encryption/decryption, terminal protocols (EBCD, BCD, and MAC), and Format conversions, design C/C++, C#.

* Network development(IXIA Bucuresti)
Creating network stack plug-ins for 3G (GTP) and 4G(LTE) used on testing high speed telecom equipment for Embedded/PC.

* Design pattern
Software specific including structural integrity, system dynamics, handling, safety, reliability, for automotive and other advanced manufacturing industries.
I created new automation (COM) interfaces for 1D-3D structure simulation module using design pattern technology from CATIA framework engine created by DASSAULT.

## Computer Vision - Team Lead

**EVO Software** (/en/companies/evo-software) in Bucharest, Romania

2 years · January, 2007 - January, 2009

Research and development
Responsibilities on R&D in image processing and recognition, an innovative software that automatically recognizes and reads information from documents and collects data and structures. It suppose advanced and novel algorithms and performance optimization:
* Document identification strategy by template match
* Image Enhancements
* Lead a team with three members.
The result distinguishes by FORMIC FUSION from UK.

Languages/Tools: C/C++ with STL + C#/vb/asp

## Senior Software Developer

**ESERVGLOBAL TELECOM ROMANIA SRL** (/en/companies/eservglobal-telecom-romania-srl) in Bucharest, Romania

1 year 11 months · February, 2005 - January, 2007

(SOFT-NET)
Contribution to the development and maintenance of a major modules component of medium scale server-side, in Mobile telecom services.
Manipulate ,analyses and store the customer user data for prepaid cards(call data records) , make statistics, aggregates datas, play with user data behavior,etc
A good starting point on development for unix/linux system where I was using scripting and debugin tools (valgrid, lint, bash/sh, git, regular expresion tools : grep, sed, awk, diff tools like meld, system tools like ps,top etc),
The challenge part here was to write the code for a safety environment . That was reflected by using construct transactional paradigm design code to create a safe module.
What I did for them was:
* coding of new modules/features and write design specs for them, writing test plan docs, write reliability code, code review, unit testing on modules, analyzing and solving issues reported by customers - bug fixing,(that's suppose detection of scenarios that reproduced)
* contributed to the training of newcomer developers.

Languages/Tools:, C/C++/Linux/Databases

## Junior Software Developer

**IPDEVEL** in Bucharest, Romania

3 years · November, 2002 - November, 2005

- Client-Server application for internal employees' activity management.
- Part of the team developing a Time & Attendance application called Astrow, for AMANO Company.
The employees are bound to use the terminals in order to indicate the current statuses.
- PcFinder for the Danish GIGASOFT company. The application is developed in C++/ASP and required networking, protocol, windows services knowledge.
- Stamps com API interface integration and SMPro app that allows the synchronization of data concerning the offline users with the

online web server through https.

ONSAT-IT
- Management of promotional products for Johnson Wax.
- Mutual investment funds for BCR Asset Management.
- Up-to-date/ modifying/ adding/ repairing/ installing ERP modules.
- Create cubes with the OLAP on the SQL Server and prepare Excel for data analysis.

Languages/Tools:, VB/C/C++/window tools/SQL databases

## My projects

**Other projects** in Bucharest, Romania
1 month · November, 2002 - November, 2002

Developed 3D Graphics applications, AI-ComputerVision, and applications on combinatorial and formal language theory + other utilities .
Studied arhitecture of Windows 95 OS(interruptions, DPMI specification functions, IOCTL interface, TSR / DxV drivers, FAT16/32, Broadcast interface API functions using the BIOS level, BIOS interruptions (for sectors, tracks, heads, logical sectors, clusters)
Developed an application for ANIMMC (The National Agency for Small and Medium Enterprises), a Romanian government institution.
GEONET and BLOMINFO cartography/geodesics - Software management staff allowances.
APARATAJ Titu - Wizard Software to export a wage information from an internal accounting software used internally in a general format required by the Labor Inspectorate.
AGROSTAR unions/organizations - Software used for management activity.
Created the sites , , , etc
Volunteering: three volunteer programs, involving educational activities for orphans and for poor children in Namibia. Also in Ploiesti at "Bethezda" school.

# Education

## Bucharest University

**Mathematics**, Master / Postuniversitary degree, București
2 years · 2018 - 2020

## University of Sciences - Math-Info domain

**Mathematics**, University (graduate)
4 years · 1998 - 2002

In 2002 I graduated the Faculty of Mathematics, section computer sciences. My graduation project was A limited C interpreter, for which I obtained the maximum grade. During the University I also attended for three years the automatic section of engineering university– 2000 and I froze it in fourth year, resumed in 2009.

## University of Engineering

**Automatic, Computers**, University (graduate)
13 years · 1997 - 2010

In 2010 I graduated the University of Engineering - Computers domain. My graduation project was Computer Vision - Face detection, for which I obtained the maximum grade.

## College "Ienechita Vacarescu"

**Computer Science**, College / Postgraduate studies
4 years · 1994 - 1998

In 1997 I graduated the computers's school department with the project "Programming Techniques Branch and Bound" for which I obtained the maximum grade.