



Grosu-Şandru Elena Diana

Date of birth: **Nationality:** Romanian | **Gender:** Female |

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65 Iuliu Maniu Boulevard, 061085, Bucharest, Romania

● WORK EXPERIENCE

01/10/2020 – CURRENT – Bucharest, Romania

MACHINE LEARNING ENGINEER – INFINEON TECHNOLOGIES ROMANIA

- Collaborated with multi-disciplinary product development teams to identify performance improvement opportunities in circuit designs.
- Engineered a new methodology for circuit dimensioning in automotive that reduced the circuit tuning time by 78%.
- Created a customized software solution, using Neural Networks and Bayesian Optimization to decrease the number of circuit redesign iterations by 37%.

02/2017 – CURRENT

ALUMNI MANAGER – UNIVERSITY POLITEHNICA OF BUCHAREST

- Activities coordination, strategy development and human resource management within the Alumni UPB office
- Develop and implement policies on the UPB Alumni Community (development, consolidation, continuous expansion)
- Constant monitoring of student engagement, through periodic queries and reports
- Facilitating relationships between students and graduates by increasing their professional network and mentoring activities.

Bucharest, Romania

02/2017 – 12/2018

STUDENT REPRESENTATIVE - ARACIS ENGINEERING 2 SPECIALTY COMMISSION – ROMANIAN AGENCY FOR QUALITY ASSURANCE IN HIGHER EDUCATION

- Active participation in committee meetings and in the evaluations carried out by ARACIS teams: discussions with students, graduates and stakeholders, their interactivity on the stage of employability and the degree of satisfaction during the studies and after the graduation, writing the assessment report.

Bucharest, Romania

01/10/2016 – 09/2020

PHD RESEARCHER – INFINEON ROMANIA

"Data-Driven Process Variation Assessment in Circuit Design Analysis using Machine Learning"

PhD Program - Pursue a doctoral degree and gain professional experience simultaneously

Department: Automotive

Subjects: Machine Learning, Deep Learning

Bucharest, Romania

01/10/2016 – 01/10/2021

RESEARCH & TEACHING ASSISTANT – UNIVERSITY POLITEHNICA OF BUCHAREST

- Subject: Microprocessors Architecture, Microcontrollers
 - Year: 2nd and 3rd year of study, Faculty of Electronics, Telecommunication and Information Technology
 - Lecturer: Corneliu Burileanu, PhD; Horia Cucu, PhD
 - Laboratory holder
 - IEEE member
 - Part of the research team for "Intelligent Video and Audio Analysis Systems and Platform" - project funded by EU Research Fund.
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MACHINE

Bucharest, Romania

24/04/2016 – 24/06/2016

RESEARCH INTERN – TÉLÉCOM PARISTECH

TSI - Multimedia Group

Dissertation Thesis - Free Navigation with Distributed Video Coding

Design and implementation of the MATLAB solution for the Free Navigation with DVC, in order to analyze Distributed Video Coding (DVC) performances compared to H.264 Advanced Video Coding (MPEG-4 AVC) performances, in the case of free navigation inside multi-view sequence videos.

- Theoretical study of the DVC and H.264 concepts and working principles;
- Understand the existing MATLAB scripts, implemented for the two video compression techniques (by the TSI Department from Telecom ParisTech) and perform their customization for the proposed solution;
- Design the software solution of Free Navigation with DVC and decide its parameters (such as number of frames of the video, the path between multi-view sequence);
- Develop the MATLAB script for the proposed solution;
- Draw the conclusions based on the RD (Rate-Distortion) performances of DVC with respect to H.264/AVC all Intra and choose the best suitable solution for Free Navigation concept;
- Establish the best decoding strategy (interpolation configurations) of WZ frames for the chosen scenario, in terms of RD performances.

Paris, France

01/05/2015 – 14/05/2015

ETS - ASSESOR STUDENT, PROJECT "DEZVOLTAREA SI CONSOLIDAREA CULTURII CALITATII LA NIVELUL SISTEMULUI DE INVATAMANT SUPERIOR ROMANESC – QUALITAS", CONTRACT POSDRU/155/1.2/S/141894 – ROMANIAN AGENCY FOR QUALITY ASSURANCE IN HIGHER EDUCATION (ARACIS)

- Responsible with the students component during the institutional evaluations of the Gheorghe Asachi Technical University, Iași
- Through discussions with students, highlights the problem in the university
- Propose solutions to overcome the identified issues

Bucharest

01/02/2015 – 30/04/2015

EXPERT RECRUITER TARGET GROUP 4 PROJECT "INSTRUIRE ȘI DEZVOLTARE ECONOMICĂ PRIN AFACERI LUCRATIVE (IDEAL)" - POSDRU/176/3.1/S/150746 – UNIVERSITY POLITEHNICA OF BUCHAREST AND DELLOITTE ROMANIA

- Informing potential target group members about the opportunities offered by IDEAL project
- Recruiting the Target Group
- Preparing registration forms for the Target Group
- Checking, preparing and correcting all relevant documents necessary for project implementation for the Target Group
- Proposals to improve recruitment methodology for the Bucharest and Ilfov region

Bucharest

15/10/2014 – 18/03/2016

OPERATIONAL SKILL CENTER ENGINEER – ORANGE ROMÂNIA SA

- RAN solutions for GSM / UMTS / LTE (Huawei equipments) and OSS validation solutions for France Telecom Group, as part of a multicultural team composed of expert engineers
- Strong cooperation with engineers specialized in different domains (transport, radio planning, radio optimization, devices) for the network improvement
- Meetings with representatives of different France Telecom subsidiaries and also Huawei employees

Bucharest

01/10/2014 – 03/2016

TEACHING ASSISTANT – UNIVERSITY POLITEHNICA OF BUCHAREST

- Subject: Microcontrollers
- Year: 3rd year of study, Faculty of Electronics, Telecommunication and Information Technology

- Lecturer: Corneliu Burileanu, PhD
- Laboratory holder.
Bucharest, Romania

01/10/2013 – 03/2016

STUDENT RESEARCHER – SPEED LABORATORY - POLITEHNICA UNIVERSITY OF BUCHAREST

-Basic knowledge about JAVA and Python
-Research developed on speed recognition and spoken language technology
-Thesis: Automation System based on Microcontrollers (NAO's voice commanding in Romanian, a robot developed by Aldebaran)
-<http://www.aldebaran.com/en/humanoid-robot/nao-robot>
Bucharest, Romania

06/2013 – 08/2013

INTERN – ORANGE ROMANIA SA

- Department: Development and Innovation (Technology-Engineering)
- Supervisor: Ana Roșu
- Projects: Orange TV, HP Service Activator (Cisco equipment, Telnet access, 2G, 3G)
Bucharest, Romania

04/2013 – CURRENT

ASSESSOR STUDENT – ROMANIAN AGENCY FOR QUALITY ASSURANCE IN HIGHER EDUCATION (ARACIS)

- Responsible with the students component during the institutional evaluations of the Romanian universities
- Through discussions with students, highlights the problem in the universities
Bucharest, Romania

04/2012 – 04/2016

PRESIDENT OF THE ELECTRONICS STUDENTS' ORGANIZATION (LIGA STUDENTILOR ELECTRONISTI) – ELECTRONICS STUDENT'S ORGANIZATION (LIGA STUDENTILOR ELECTRONISTI)

-Project management (more than 1000 members and 300 active members)
-Representing the students in the Faculty's and University's Committees
-Organizing and coordinating events for the Faculty's students and students from Politehnica University of Bucharest
-Leading people and mentoring in personal development area
-Re-branding the organization
-High degree responsibility
-Professional projects such as: MobilPRO (mobile application contest), Robochallenge (autonomous robots contest), Career Team (career events for students and create links between the companies and the students)
Bucharest, Romania

● EDUCATION AND TRAINING

03/2021 – CURRENT

DATA SCIENTIST – Crystal Systems

02/2021 – CURRENT

PYTHON FUNDAMENTALS – Telacad Academy

05/2020 – CURRENT

REBOOT YOUR SKILLS! – UiPath

05/2017 – 07/2017

MACHINE LEARNING - STANFORD COURSE – Coursera Coursera - <https://www.coursera.org/learn/machine-learning/>

- Supervised learning (parametric/non-parametric algorithms, support vector machines, kernels, neural networks)
- Unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning)
- Best practices in machine learning (bias/variance theory; innovation process in machine learning and AI)

07/2016 – 09/2016 – Bucharest, Romania

DATABASES - FUNDAMENTALS – Telacad Academy

- Create, View, Select
- Functions, Procedures, Cursors

18/07/2016 – 22/07/2016 – Barcelona, Spain

SUMMER SCHOOL GRADUATE – University of Barcelona

"Meeting the Social Responsibility of Universities in Service Learning Projects"

- What does it mean and how can a Service Learning Projects be implemented?
- Developing and implementing such projects within the University Politehnica of Bucharest

10/2014 – 07/2016 – Bucharest, Romania

STUDENT - MASTER'S DEGREE – Faculty of Electronics, Telecommunications and Information Technology

Dissertation Thesis: Free Navigation with Distributed Video Coding (DVC)

Specialty: Management of Services and Networks (or romanian: MSR)

Teaching language: Romanian

Grades average:

- First year, 2014/2015, 10 (ten point zero-zero)
- Second year, 2015/2016, 9.83 (nine point eighty-three)

Dissertation Thesis: Free Navigation with Distribution Video Coding (DVC)

06/2013 – 07/2014 – Bucharest, Romania

ORANGE EDUCATION PROGRAM PARTICIPANT – Orange Romania SA

- Integrated Educational Program developed by Orange
- 1st place admitted in the program
- Internship (Development & Innovation), Scholar, Specialized Courses (Radio Access, Core Networks, High Level Architectures, Transmission Networks, Network Planning)

01/2012 – 09/2013 – Bucharest, Romania

CISCO CERTIFIED NETWORK ASSOCIATE EXPLORATION - NETWORKING BASICS CCNA 1 & ROUTING PROTOCOLS AND CONCEPTS CCNA2 & LAN SWITCHING AND WIRELESS CCNA3 – Infoacademy Romania

- Networking, routing and switching basics
- Troubleshooting

03/12/2012 – 17/12/2012 – Bucharest, Romania

LTE: THE JOURNEY TO THE UNLIMITED DATA DREAM – Freescale Romania

- Basic knowledge about LTE
- Trainer: Andrei Alexandru Enescu, 3G/4G Wireless System Engineer

11/06/2012 – 30/06/2012 – Romania

INTERN – NOKIA

- Mobile application
- Internet services
- Internship organized by Faculty of Electronics, Telecommunications and Information Technology through SAIM Laboratory
- Coordinator: Popovici Eduard, PhD

Field(s) of study

- Electronics

27/06/2012 – CURRENT

GE FOUNDATION SCHOLAR-LEADER – Ge Foundation and IIE

One of the 32 European students involved in the project developed by GE Foundation and IIE [International Institute of Education]

The GE Foundation Scholar-Leaders Program provides financial support and leadership development to talented undergraduate students enrolled in engineering, technology or business management programs.

International

10/2010 – 06/2013 – Bucharest, Romania

PSYCHO - PEDAGOGICAL MODULE – Teacher Training Department, University Politehnica of Bucharest

- Educational Psychology

- Pedagogy

- Methodology - teaching technical subjects

- Teaching Practice

10/2010 – 07/2014 – Bucharest, Romania

STUDENT - BACHELOR'S DEGREE – Faculty of Electronics, Telecommunications and Information Technology

Diploma Thesis: Automation System based on Microcontrollers

Specialty: Technology and Telecommunications Systems (or romanian: TST)

Teaching language: English

Valedictorian - grades average 10

12/2009 – Bucharest, Romania

CAMBRIDGE ESOL LEVEL 1 CERTIFICATE IN ESOL INTERNATIONAL – British Council

First Certificate in English, Grade B

2006 – 2010 – Campulung-Muscel, Romania

BACCALAUREATE DIPLOMA – National College "Dinicu Golescu"

Specialty: Mathematics Informatics - Intensive

Grade: 9.80 (nine point eighty)

● LANGUAGE SKILLS

Mother tongue(s): ROMANIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
GERMAN	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● CONFERENCES AND SEMINARS

Conferences

- Infineon Innovation Week 2017 & 2018 & 2019, Munchen, Germania
- EEML2019 - Eastern European Machine Learning Summer School on Deep Learning and Reinforcement Learning, July 2019 - organized by Deep Mind and Romanian Association for Artificial Intelligence
- Droidcon 2014, Bucharest, Jubilee - Speaker - Project MobilPRO (Mobile Application Contest organized by LSE)
- ECAI (Electronics, Computers and Artificial Intelligence) 2014, Bucharest, UPB Library Conference Center - Organizing Committee
- EESCIRC/EESDERC 2013, Bucharest, Marriott Hotel - Organizing Committee
- EUSIPCO (Signal Processing) 2012, Bucharest, The Palace of Parliament - Organizing Committee

● **RECOMMENDATIONS**

- Mihnea Costoiu, Rector - University Politehnica of Bucharest, mihnea.costoiu@upb.ro
- Prof. Corneliu Burileanu , Vice-President - University Politehnica of Bucharest Senate, 0744700021, corneliu.burileanu@upb.ro

● **ORGANISATIONAL SKILLS**

Organisational skills

- Leadership qualities acquired in coordinating the activities of the Alumni office and in projects undertaken within the organization (LSE)
- Coaching skills, responsible for material resources, organizing and presenting workshops
- Can mobilize, pique and stimulate a team to achieve better results
- Tenacious
- Professionalism
- Teamwork capabilities (both as a member and as a leader)

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Communication and interpersonal skills

- Good written and verbal communication skills
- Public Speaking, Motivational Speaking
- Optimistic, Sociable, Persistent, Consequent, Open-Minded
- Able to work under pressure for a long period of time
- Communication and Negotiation Skills

● **JOB-RELATED SKILLS**

Job-related skills

- High skills: Python, Matlab, Machine Learning Algorithms, C++, CCNA, MySQL, GSM/UMTS/LTE Huawei RAN and OSS
- Average skills: Wordpress, ICS Telecom, CodeWarrior IDE, NetBeans IDE, Python, Java
- Good knowledge of quality control processes in higher education (currently being a student expert evaluator of the Romanian Agency for Quality Assurance in Higher Education in Romania)
- Maintains and deals with the dissemination of the information platform specific to the Speed Research Laboratory , used to disseminate research results, project offers, other specific information from the University Politehnica of Bucharest
- Certificate of competency in IT - Borland C ++, Borland C, Microsoft Office, Oracle SQL
- Language Proficiency Certificate in Romanian oral communication, experienced user
- Certificate of language proficiency in an international language, English language level B2 -Digital Competence Certificate, experienced user, 100 points

● **OTHER SKILLS**

Other skills

- Capable of working under pressure for a long time;
- Good organizer, high teamwork capability, good coordinator of a work team or activity;
- Tolerant, honest, seriousness, prompt, cooperative sociable, receptive, open to new ideas;
- Ability to work with documents, good ability to communicate in writing and verbal;
- Activities planning capabilities, observation spirit, attention, perseverance, rigor;
- Ability to work under stress, in emergency or unexpected situations.

● SCIENTIFIC ACTIVITY

Scientific Activity

Publications:

- **Elena-Diana Şandru**, A. Buzo, H. Cucu and C. Burileanu. Recent Experiments and Findings in Baby Cry Classification. In *Fratu O., Militaru N., Halunga S. (eds) Future Access Enablers for Ubiquitous and Intelligent Infrastructures. FABULOUS 2017. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, 241:253-360, July 2018, ISI WOS
- **Elena-Diana Şandru**, and E. David. Unified Feature Selection and Hyperparameter Bayesian Optimization for Machine Learning based Regression. In *Proceedings of the International Symposium on Signals, Circuits and Systems (ISSCS)*, pages 1-5, Iaşi (România), July 2019, ISI WOS
- **Elena-Diana Şandru**, C. Burileanu, E. David, A. Buzo, and G. Pelz. Modeling the Dependencies between Circuit and Technology Parameters for Sensitivity Analysis using Machine Learning Techniques. In *Proceedings of the 16th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD)*, pages 237-240, Lausanne (Switzerland), July 2019, ISI WOS
- **Elena-Diana Şandru**, E. David, and G. Pelz. Pre-Silicon Yield Estimation using Machine Learning Regression. In *Proceedings of the 26th IEEE International Conference on Electronics Circuits and Systems (ICECS)*, pages 103-104, Genoa (Italy), November 2019, ISI WOS - **Best Poster Award**
- **Elena-Diana Şandru**, E. David, and G. Pelz. Machine Learning-Based Local Sensitivity Analysis of Integrated Circuits to Process Variations. In *Proceedings of the 27th IEEE International Conference on Electronics Circuits and Systems (ICECS)*, pages 1-2, Glasgow (Scotland), November 2020, ISI WOS - **Best Presentation Award**
- I. Kovacs, M. Ţopa, C. Pop, **Elena-Diana Şandru**, A. Buzo, and G. Pelz. Correlating Electrical and Process Parameters for Yield Detractors' Detection. In *Proceedings of the 14th International Symposium on Electronics and Telecommunications (ISETC)*, pages 1-4, Timişoara (Romania), November 2020, ISI WOS
- **Elena-Diana Şandru**, E. David, I. Kovacs, A. Buzo, C. Burileanu, and G. Pelz. Modeling the Dependency of Analog Circuit Performance Parameters on Manufacturing Process Variations with Applications in Sensitivity Analysis and Yield Prediction. In *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 2021 - **Q2, IF: 2.168**
- **Elena-Diana Şandru**, C. Burileanu, E. David, and G. Pelz. On the Robustness of the Methodology for Modelling the Dependencies between Circuit and Technology Parameters of Integrated Circuits. In *University POLITEHNICA of Bucharest Scientific Bulletin, Series C: Electrical Engineering and Computer Science*, 2021 - **Accepted Paper**.

Others:

- "On Machine Learning based Modelling of the Dependency of Chip and Process Parameters for Sensitivity Analysis", Infineon Innovation Week, 2018, Munchen, Germany
- "A Qualitative Analysis of the Process Variation on Circuit Design", Infineon Innovation Week, 2017, Munchen, Germany

● TRAININGS

Trainings

- "Periodical Training of New ARACIS Evaluators", University "Lucian Blaga" of Sibiu, Sibiu, Romania, 16 - 17.03.2017
- "Project Management", Grigore Bontis, Soft Skills Training, Bucharest, Romania, 2014 - Course accredited ANC (National Authority for Qualifications)
- "Non-Formal Education", Centro Studi ed Iniziative Europeo, Palermo, Italy, 2012 - Youth in Action European Project
- "Project Management Initiation", Adrian Butuc, Procter&Gamble Balkans, Bucharest, Romania, 2011
- "Masculinity vs. Femininity", Psychologist Nicoleta Cersea, Bucharest, Romania, 2011
- "Creativity and Innovation", Procter&Gamble Balkans, Bucharest, Romania, 2011
- "What's in a Price?", Procter&Gamble Balkans, Bucharest, Romania, 2011
- "Teamwork", Iulian Penescu, Dynamic Learning, Bucharest, Romania, 2010
- "Applied Public Speaking", Mihai Alexandrescu and Violeta Paraschiv, Bucharest, Romania, 2010
- "Poiana Pinului" International Camp, Sigma Foundation for European Integration, Buzău, Romania 2009
- "Citizenship and Local Responsibility", Sunny Wong, "Muşcel - for Education and Culture Association", Câmpulung Muşcel, Romania, 2008

● VOLUNTEERING

Volunteering

"Academic Associate", Global Women in Tech, 2018 - present

"P&G Campus Ambassador", Procter&Gamble Balkans, September 2010 - June 2012 (Representative of the company in campus; Designs and carries out projects funded by the company for students, based on their needs)

"Give the Gift of Sight", Lyons Romania, Luxotica Group, July 2008 (English Translator, Medical Help, Guide of the Consultation Process of the Patients)