CURRICULUM VITAE

Elena Burceanu

 $\textbf{Google Scholar:} \ \texttt{https://scholar.google.com/citations?user=bL34yDkAAAAJ}$

Website: ilarele.github.io

| | Oct. 2016–present | PhD student, Faculty of Mathematics and Computer Science, University of Bucharest, Romania working on Object consis- tency in Video for Segmentation and Tracking tasks, under Marius Leordeanu and Gheorghe Stefanescu supervision |
|-------------|----------------------|--|
| EDUCATION | 2011–2013 | MSc in Parallel and Distributed Computer Systems, Faculty of Automatic Control and Computer Science, Politehnica University of Bucharest, 9.67/10 |
| | 2007–2011 | BSc in Computer Science and Engineering, Faculty of Automatic Control and Computer Science, Politehnica University of Bucharest, 9.32/10, with the main interest in Operating Systems, Compilers Design, and Artificial Intelligence related |
| | 2004–2007 | courses Mircea cel Batran National College, Constanta, Romania Math and Physics contests and olympiads, national, and international phases |
| | summer 2012 | Internship Student at Inria, Rennes, France |
| INTERNSHIPS | summer 2011 | I build on top of Blobseer (a file system for large scale distributed storage services) a scalable layer for context-aware data-intensive applications. It enables mobility and provisioning of data according to user location in real-time, discovery and registration of data sources, efficient data access at different granularities, and support for complex queries. Google Summer of Code Student at OpenIntents.org My project involved adding support for more sensors in the Sensor Simulator for Android, that simulates sensor input without the need of a physical android device (at the time, there were few devices with advanced sensor capabilities and the simulator was intensively used by developers). |

Sep. 2014-

Machine Learning Researcher, Team Lead

Our team reaches for top research and conferences, making a name for Bitdefender and Romania on the world map of AI. We give machine learning training and advice inside the company. I work in unsupervised video understanding, specifically on single object tracking and segmentation, which is also my PhD subject and captures my full focus.

Dec. 2013–Jul.2014 Dec. 2013–Jul.2014 *Warbles radio startup* - an app for recommending custom radio stations based on the user history and the current program.

IUR startup - a service for venues that allows them to acquire/profile/loyalize customers and clients to fast order from a mobile app instead of the waiter, based on bluetooth beacons for indoor localization, a recent technology for those days.

2011-2014

iOS and OSX Prototyping Developer, Bitdefender, Romania

Clueful: built a system that detects and analyzes your installed apps both statically and dynamically, to find sensitive data (privacy related) used by the app.

Smart Battery: complex machine learning heuristics for determining which apps are using more battery, based on each user behaviour (this was particularly hard for iOS, due to major restrictions that Apple imposes on gathering OS, user, and apps information through code). Other proof of concept security-related apps: VPN, MDM.

Antivirus for Mac: contributed to OSX solution from Bitdefender, building a scanning cache system (based on OSX file system particularities), and addressing performance issues.

2009-2011

Android Developer, Freelancer

I have worked remotely on prototyping very original ideas, as Android was in its very early ages (starting with the 1.5 API version). I worked on projects from Japan, Sweden, Ireland, France.

| TS | | |
|-------------------|----------------|--|
| ŒC | UEFISCDI | Principal Investigator, Author Identification, using Web and |
| FOUNDED PROJECTS | 2020-2022 | DarkWeb Text Correlation, for increasing Cybersecurity, Bitde- |
| $P_{\mathcal{L}}$ | | fender and University of Bucharest (Marius Popescu) |
| Q | UEFISCDI | Principal Investigator, Querying Databases in Natural Lan- |
| IDE | 2016-2018 | guage Using Deep Learning, Bitdefender and Politehnica Uni- |
| NN | | versity of Bucharest (Traian Rebedea) |
| FO | | |
| | 2017-2020 | PhD Scholarship from AUF (Agence Universitaire de la Fran- |
| | | cophonie) |
| | 2018 | Best poster: Transylvanian Machine Learning Summer School |
| SC | 2002-2007 | Awards at various regional, national and international Mathe- |
| IRI | | matics and Physics competitions |
| AWARDS | 2004-2007 | Participation at National Mathematical Olympiad in all high- |
| A | | school years (with 3 bronze medals awards) |
| | 2003 | Mention at National Physics Olympiad |
| | 2003 | Valedictorian at Theoretical High-School "Ovidius", Constanta, |
| | _ | Romania, special class for middle school |
| | Jan. 2020 | Video Object Segmentation over Space-time, Bitdefender Tech- |
| | T | Days |
| | Jan. 2020 | Teaching Deep Learning for Product Managers, Bitdefender |
| | MayAug. 2019 | Teaching Deep Learning Course for engineers, Bitdefender |
| | 2019/2020/2021 | Teaching Deep Learning Course, University of Bucharest |
| TALKS | Feb. 2019 | Video Understanding in Bitdefender Computer Vision Lab, |
| | Jun. 2017 | Timisoara Machine Learning Workshop 2019, Romania <i>Learning a Robust Society of Tracking Parts</i> , RAAI 2017 workshop, |
| | Jun. 2017 | University of Bucharest, Romania |
| | Aug. | Presentations on several themes: <i>adversarial examples, problems</i> |
| | 2016–present | that arise in neural networks non-convex optimization, unsupervised |
| | 2010 present | tracking, current tracking solutions, and datasets, at Computer Vi- |
| | | sion Seminar, IMAR |
| | Oct. | Presentations on several themes: <i>AlphaGo, the landscape of the</i> |
| | 2015–present | cost function, tracking, at Bucharest Deep Learning Meetup |
| | summer 2010 | Android trainer at ROSEdu Summer of Code |
| | | |

| OTHER SCIENTIFIC ACTIVITIES | 2019– | Reviewer at top AI conferences: ICML, NeurIPS, CVPR, ICCV, ICLR, AAAI |
|-----------------------------|----------------|---|
| | Jul. 2020 | Teaching Assistant at Virtual EEML2020 Summer School |
| | Jul. 2019 | EEML2019 Summer School |
| | | - one week, 250 students and top researchers, eeml.eu |
| | | - local co-organizers: me, Traian Rebedea, Marius Leordeanu |
| | | - organizers: Viorica Patraucean, Razvan Pascanu, Doina Pre- |
| | | cup |
| | Oct. 2015– | Bucharest Deep Learning Meetup |
| | | - organizers: me, Traian Rebedea, Tudor Berariu |
| | Jul. 2018– | Reading Group, IMAR and Bitdefender |
| | Jul. 2017–2019 | Statistics/Linear Algebra Seminar, IMAR |
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