

ANDREA LODDO

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EDUCATION

PhD in **COMPUTER SCIENCE** at University of Cagliari, Italy, **October, 2015 - February 2019** Advisor: Prof. Cecilia DI RUBERTO

MSc in **COMPUTER SCIENCE** at University of Cagliari, Italy, **October 2012 – September 2014** Final Mark: 106/110 GPA: 27.5/30 Thesis: “Learning by Sampling for Blood Cell Images Segmentation” | Advisor: Prof. Cecilia DI RUBERTO

BSc in **COMPUTER SCIENCE** at University of Cagliari, Italy, **October 2009 - July 2012** Final Mark: 109/110 GPA: 26.5/30 Thesis: “Visual Engine for Reading On Network In Comprehensive Acceptation” | Advisor: Prof. Gianni FENU

WORK EXPERIENCE

Internship at HEIG-VD. **September 2017 – January 2018** I collaborated with Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud, under the supervision of prof. MICHEL KOCHER as part of my PhD programme. I studied and analysed malaria-affected blood cells images, thanks to a collaboration with Microbiologie dept. at Centre Hospitalier Universitaire Vaudois (CHUV).

Android and iOS Developer at Eventa. **July, 2015 – August, 2016** I contributed to the development of an iOS app by using Swift programming language.

Teacher at Unitelsardegna, Cagliari. **November 2014, – June 2015** I taught basics computer science arguments to the owners of agricultural-related businesses.

Android Developer at FlossLab, spinoff of the University of Cagliari. **June, 2014 – June, 2015** My contributions are related to the mobile app development, either in Android and iOS platforms.

Teaching assistant at University of Cagliari. **March 2013 – Current** I prepare my own material and teach (in place of the professor) laboratory lectures of 3 hours. I have worked 2 times as teaching assistant of Computer Networks (150 bachelor students) and 2 times as teaching assistant of Algorithms and Data Structures (150 bachelor students).

Intern at University of Cagliari. **February 2012 – June 2012** I led a team of 5 students with the goal of studying and developing a web platform in order to help dyslexic children doing their homework. The system was composed of a voice synthesizer for reading books, articles or, in general, readable material. The team collaborated with different stakeholders: the health department of the Autonomous Region of Sardinia and some researchers belonging to the Law and Computer Science Dept. of the University of Cagliari.

OTHER WORKS

Blood donor at A.V.I.S. Italy **November, 2013 – Current** Sardinia is one of the areas with the highest concentration of thalassemia patients (12% of population). Blood transfusions are indispensable. My aim is to donate my blood every 3 months.

COMPUTER SKILLS

Work and academic experience *Java*.

Didactic and academic experience *C*.

Work and academic experience

- Operating Systems: *Linux, Windows Mac OS*.
- Client side: *HTML, CSS, JavaScript, JQuery*.
- Server side: *Apache, SQL, PHP, XML, Bash*.
- IDE: *Netbeans, Eclipse, IntelliJ IDEA, XCode, Android Studio, Qt Creator*.
- Version control: *BitBucket, Git*.
- Documents and presentations: *LaTeX, Drive, LibreOffice, Microsoft Office*.

Academic experience *C++, MatLab, UML, Ocaml*.

MISCELLANEOUS

Publications

- C. Di Ruberto, A. Loddo, L. Putzu. *A multiple classifier learning by sampling system for white blood cells segmentation*. Proceedings of the 16th International Conference on Computer Analysis of Images and Patterns, CAIP 2015; Volume 9257, 2015, Pages 415-425.
- C. Di Ruberto, A. Loddo, L. Putzu. *Learning by sampling for white blood cells segmentation*. Proceedings of the 18th International Conference on Image Analysis and Processing, ICIAP 2015; Volume 9279, 2015, Pages 557-567.
- C. Di Ruberto, A. Loddo, L. Putzu. *Peripheral blood image analysis*. Proceedings of the Doctoral Consortium, 11th Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISIGRAPP 2016; Pages 15-23.
- C. Di Ruberto, A. Loddo, L. Putzu. *A leucocytes count system from blood smear images: Segmentation and counting of white blood cells based on learning by sampling*. Machine Vision and Applications; Volume 27, Issue 8, November 2016, Pages 1151-1160.
- C. Di Ruberto, A. Loddo, L. Putzu., G. Fenu *A Computer-Aided System for Differential Count from Peripheral Blood Cell Images*. Proceedings of the 12th International Conference on Signal Image Technology & Internet-Based Systems; Pages 112-118.
- A. Loddo, C. Di Ruberto, L. Putzu *Histological image analysis by invariant descriptors*. Proceedings of the 19th International Conference on Image Analysis and Processing, ICIAP 2017; Pages 345-356.
- S. Porcu, C. Di Ruberto, A. Loddo, L. Putzu. *White Blood Cells Counting Via Vector Field Convolution Nuclei Segmentation*. Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISAPP 2018.
- A. Loddo, C. Di Ruberto, M. Kocher. *Recent Advances of Malaria Parasites Detection Systems Based on Mathematical Morphology*. Sensors. Volume 18, number 2, Pages 513, 2018.

- A. Loddo, C. Di Ruberto, M. Kocher., G. Prod'Hom *MP-IDB: The Malaria Parasite image database for image processing and analysis*. SaMBa Workshop at MICCAI Conference, 2018.

PhD Schools

- VISUM 2018 - 6th International Summer School on VISion Understanding and Machine intelligence, courses arguments: Deep Learning, Machine Learning, Computer Vision Neuroimaging;
- BigDat 2016 - 2nd International Winter School on Big Data, courses arguments: Big Data, Decision Trees, Machine intelligence, Data integration;
- MISS 2016 - Medical Imaging Summer School, courses arguments: Machine Learning, Deep Learning, Image Processing, Medical Image Analysis.

Talks

- Doctoral Consortium of 11th Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISIGRAPP 2016: I presented my PhD research project proposal;
- Signal Image Technology & Internet Based Systems, SITIS 2016: I presented a system of differential blood cells counting (part of my PhD research project).
- 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISAPP 2018: I presented the work "White Blood Cells Counting Via Vector Field Convolution Nuclei Segmentation" (part of my PhD research project).

Misc

- 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISAPP 2018: session chair of motion, tracking and stereo video session.

Languages Italian (mother tongue), English (Written-Spoken B2 Level)

Research Interests Operative systems, programming languages, mobile app development, medical image analysis, machine learning, deep learning.

Personal Interests Travelling, Movies and TV series, Music, Running, Basketball and Soccer.

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali"