

FLORIN CHELARU

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EDUCATION	University of Maryland , College Park	Jan 2011
	<i>Doctor of Philosophy, Computer Science</i>	–
	Cumulative GPA: 3.89/4.0	May 2015
	Advisor: Dr. Héctor Corrada Bravo	
	Dissertation: Epiviz: interactive visual analytics software for genomics 📄	
	Relevant coursework: Machine Learning (H. C. Bravo); Information Visualization (B. Shneiderman); Neural Modeling (J. Reggia); Computational Linguistics (K. H. Seitz); Computational Genomics (C. Kingsford); Functional Genomics (H. C. Bravo); Computer Vision (Y. Aloimonos).	
	University Al. I. Cuza , Iași, Romania	Sep 2004
	<i>Bachelor of Science, Computer Science</i>	–
	Cumulative GPA: 9.45/10.0	Jun 2008
	Class Rank: 8 of 176	
	Advisor: Dr. Liviu Ciortuz	
	Bachelor's dissertation: Artificial Intelligence in Computer Go 📄	
	Relevant coursework: Machine Learning; Bioinformatics; Neural Modeling; Evolutionary Algorithms; Artificial Intelligence; Graph Theory; Algorithm Design; Probabilities and Statistics; Calculability, Decidability and Complexity; Cryptography; Antivirus Technologies; Software Engineering and Design Patterns; C/C++; C# and .NET Framework; Java; Relational Databases and SQL.	
EXPERIENCE	Twinfog Inc. – https://www.twinfog.com	June 2016
	<i>Co-Founder & CTO</i>	–
	In charge of the mobile UI (Angular.js, Ionic), as well as part of the server-side components (MS SQL, ASP.NET) for the Twinfog mobile platform.	present
	MIT Computer Science and Artificial Intelligence Laboratory	August 2015
	<i>Postdoctoral Associate</i>	–
	Expanded on the work done for my Ph.D. by architecting a series of open-source visualization libraries for <i>genetic variants</i> analysis. Base library code available here: https://github.com/florin-chelaru/vis.js .	present
	University of Maryland Center for Bioinformatics and Computational Biology	Jan 2011
	<i>Graduate Research Assistant</i>	–
	Architected and implemented Epiviz (epiviz.cbcb.umd.edu 📄), an open-source visualization tool used in the <i>Genomic Research</i> community for the analysis, exploration, and extracting insights from <i>genomic</i> and <i>epigenomic</i> data. Code available here: https://github.com/epiviz .	Jun 2015
	Rocket Fuel Inc., Artificial Intelligence Team	2014,
	<i>Graduate Internship</i>	Jun–Sep
	Designed and implemented <i>Machine Learning</i> probabilistic models and <i>Visualization</i> infrastructure for <i>Big Data</i> analysis, in particular for <i>Ad Click Prediction</i> .	2013,
		Jun–Sep
	Facebook Inc., Spam Detection Team (Site Integrity)	2012,
	<i>Graduate Internship</i>	May–Aug
	Designed and implemented <i>Machine Learning</i> models for the detection of <i>spam users</i> and <i>content</i> .	

University of Maryland Department of Computer Science	Jan 2011
<i>Graduate Teaching Assistant</i>	–
CMSC702 – Computational Systems Biology (Instructor: Dr. Hector Corrada)	Dec 2012
CMSC433 – Parallelism and Multithreading in Java (Instructors: Dr. Adam Porter, Dr. Tom Yeh)	
CMSC420 – Data Structures (Instructor: Professor Hanan Samet)	
Microsoft Inc., Office Team (Lync Server)	Jun 2010
<i>Software Design Engineer</i>	–
Designed database optimization software for improving the performance of the Lync Communication Server.	Jan 2011
Microsoft Inc., Bing Team (Search Domain Relevance)	Sep 2008
<i>Software Design Engineer in Test</i>	–
Designed and developed software for measuring the quality of web search results. Specifically, created Machine Learning models for improving the relevance of the content of text snippets.	Jun 2010
Code40 Inc. Romania	2007,
<i>Undergraduate Internship</i>	Jul–Aug
Designed and implemented components of a web server application for micro-loans: caching, back-end data validation, error handling.	

PUBLICATIONS **F. Chelaru***, J. N. Paulson and H. C. Bravo, “Metaviz: Integrative visualization for metagenomics”. *In preparation*.


F. Chelaru* and H. C. Bravo, “Epiviz: a view inside the design of an integrated visual analysis software for genomics”. BMC Bioinformatics, 16 Suppl 11, S4. <http://doi.org/10.1186/1471-2105-16-S11-S4>

F. Chelaru*, L. Smith, N. Goldstein, and H. C. Bravo, “Epiviz: interactive visual analytics for functional genomics data,” *Nature Methods*, vol. 11, no. 9, pp. 938–940, Aug. 2014. <http://dx.doi.org/10.1038/nmeth.3038>

H. C. Bravo*, **F. Chelaru**, L. Smith and N. Goldstein, “epiviz: R Interface to epiviz web app,” Bioconductor package: 1.4.2.

F. Chelaru* and L. Ciortuz, “Combining old-fashioned computer go with monte carlo go,” in *Proceedings of the 2008 10th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, SYNASC 2008*, 2008, pp. 216–222.
<http://dx.doi.org/10.1109/SYNASC.2008.77>

S. Iftene* and **F. Chelaru**, “The general Chinese remainder theorem,” in *International Scientific Journal of Computing*, vol. 6, issue 1, pp. 44–50, 2007. http://www.computingonline.net/archieve/IJC_2007_06_1_05.pdf


OPEN-SOURCE **Epiviz** (epiviz.cbcb.umd.edu )

SOFTWARE  [epiviz](https://github.com/epiviz), epiviz.github.io

A web visualization tool used to aid in the analysis and exploration of large functional genomics data.

Technologies used: HTML5, JavaScript (jQuery, [d3.js](https://d3js.org/) , WebSockets), PHP, MySQL, R/Bioconductor, Python.

IsoCreator (iso-creator-cs.sourceforge.net ) , released February 2007

A .NET app used to create ISO 9660 Joliet CD/DVD images from folders on the local machine. It currently has ~20K downloads per month .

Technologies used: C#, .NET Framework 2.0.

TECHNICAL OO Low-level Languages: Java (J2EE); Microsoft .NET (C# and the CLR); C; C++.

SKILLS OO and Functional High-level Languages: Python; R/Bioconductor; HTML5 JavaScript, PHP.

Databases: SQL (MySQL, Microsoft SQL Server); Apache Hive (Hadoop).

LANGUAGES Romanian – native, English – fluent.

REFERENCES

Dr. Héctor Corrada Bravo

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College Park, MD 20742

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Dr. Jack van Ryswyck

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Redwood City, CA 94063

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Dr. Michael Benisch

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