Andrei V. Anghelescu

DIMACS, Rutgers University
110 Frelinghuysen Road
Piscataway, NJ 08854-8018
angheles@cs.rutgers.edu

Summary

Ph.D-seeking graduate student in the Department of Computer Science, Rutgers University, with expertise in Machine Learning, Discrete Optimisation, Information Retrieval, Structural Data Analysis and Visualisation, and their applications in text analysis, linguistics and bioinformatics.

Education

2006 Ph.D., Department of Computer Science, Rutgers University (expected 2006)
2003 M.S., Department of Computer Science, Rutgers University
1998 B.S., Department of Mathematics, University of Bucharest

Professional Experience

PH.D. GRADUATE STUDENT (EXP. 2006) — RUTGERS UNIVERSITY
1999-PRESENT — NEW JERSEY, USA

Research and teaching assistantships in DIMACS and the Department of Computer Science:

2005	Ongoing collaboration with the Linguistics department at Rutgers, in the development of a study of anaphora in African languages.
2002-present	Research assistant in the KD-D sponsored "Monitoring Message Streams" project at DIMACS (principal investigator Dr. Fred Roberts; supervisors Dr. Ilya Muchnik and Dr. Casimir Kulikowski).
2001	Research assistant in the Plant Genome Initiative at Rutgers (supervisor Dr. Casimir Kulikowski).
2001-present	Research assistant in the Computer Science department at Rutgers University (supervisors Dr. Casimir Kulikowski and Dr. Ilya Muchnik). Projects in text analysis with applications in bio-informatics.
1999	Research assistant, supervisor Dr. Sven Dickinson. Project on development of "Vision-Equipped Agents for the Disabled".
1999-2002	Teaching assistant in the Computer Science Department, Rutgers University. Courses taught include: Numerical Analysis, Internet Technology, Data Structures, Computer Graphics.

GRADUATE INTERN — PHARMACOPEIA, DRUG DISCOVERY INC.
2004-2005 — NEW JERSEY,USA

Mentor: Dr. David Diller
Created a patented technology for estimating molecular 3D structures using multiple alignments of 1D representations of such molecules. Developed a scalable clustering procedure for molecular fingerprint data.

SOFTWARE ENGINEER — BOUYGUES TELECOM
1998-1999 — PARIS, FRANCE

Various projects in the Network and IT department, including:

- developed automatic cell frequency allocation software, using Monte Carlo methods (Simulated Annealing and Genetic Algorithms). Integrated with PlaNET® and ComOpt®
- supervised and contributed to the development of a hardware inventory distributed database, with Oracle® back-end and Delphi-based front-end

SYSTEM ADMINISTRATOR — UNIVERSITY OF BUCHAREST
1997 — BUCHAREST, ROMANIA

Maintained Windows NT network. Updated institutional database. Assisted in the roll out of various software programs.

PROGRAMMER — SUMUS S.R.L
1996-1998 — BUCHAREST, ROMANIA

Developed and maintained various programs with applications in civil engineering.

Skills

Computer capacities

- Expert in C++, Perl, Python, various UNIX shells, and Java. Long-standing experience with various libraries: STL (Standard template library), Common C++, Lemur (text retrieval), and ACE (Adaptive Communication Environment).
- Wrote (in C++) an object-oriented library of classification and feature selection algorithms, data representation, wrappers to SVM learning software (i.e. SVM^{Light}) and other machine learning related algorithms. Published under Academic Free License.
- 5 years of experience administering a small Linux network with approximately 10 users.

Communication

- Strong written and inter-personal skills, with several years of experience in teaching and presenting.
- Comfortable and effective speaker in all situations.
- Fluent in English, French and Romanian. Proficient in German.
- International experience obtained from working in three different countries.

Professional organizations and activities

- President (2002-2003) and vice-president (2001-2002) of the Rutgers Computer Science Graduate Student Society.
- Member of IEEE and ACM.

Selected Publications

[1] Andrei V. Anghelescu, Aynur Dayanik, Dmitriy Fradkin, Alex Genkin, Paul Kantor, David Lewis, David Madigan, Ilya Muchnik, Fred Roberts Simulated Entity Resolution by Diverse Means In *Proceedings of the KDD Challenge Cup*, 2005

[2] Andrei V. Anghelescu and Ilya B. Muchnik. Combinatorial PCA and SVM methods for feature selection in learning classification (applications to text categorisation). In *Proceedings of the IEEE International Conference on Integration of Knowledge Intensive Multi-Agent Systems (KIMAS '03)*, pages 491–496, 2003.

[3] Andrei V. Anghelescu and Ilya B. Muchnik. Optimisation of SVM in the space of two parameters: weak margin and intercept. Applications to text classification. *JICRD*, 2004.

[4] Andrei V. Anghelescu, Endre Boros, Dmitriy Fradkin, David D. Lewis, Vladimir Menkov, David J. Neu, Kwong Bor Ng, and Paul B. Kantor. Prospective data fusion for batch filtering. *JICRD*, 2003.

[5] Andrei V. Anghelescu, Endre Boros, David D. Lewis, Vladimir Menkov, David J. Neu, and Paul Kantor. Rutgers filtering work at TREC 2002: Adaptive and batch. In *Proceedings of the 11th Text Retrieval Conference (TREC 2002)*, 2002.

[6] Andrei V. Anghelescu, Ilya B. Muchnik, and Casimir A. Kulikowski. Categorization of scientific papers by consensus clustering from pre-defined lists of keywords: Application to medical informatics. In *Proceedings of the Medical Informatics Symposium in Taiwan*, 2002.

[7] Casimir A. Kulikowski, Ilya B. Muchnik, Akshay Vashist, Andrei V. Anghelescu, Hwaseob J. Yun, Eric Linton, and Joachim Messing. Multi-alignment of paralogs for functional annotation: Application to the rice genome. In *Proceedings of the 5th Annual Conf. on Computational Genomics, Baltimore, 18*, 2001.