

MARIOS A. PAPACHRISTOU

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RESEARCH INTERESTS	Data Science, Machine Learning, Recommender Systems, Computational Law, Software Engineering, Algorithms
EDUCATION	<p><b>Cornell University</b> <i>to start in Sept. 2020 –</i> Ph.D. in Computer Science. – Concentration on Data Science.</p> <p><b>National Technical University of Athens</b> <i>2015– (expected graduation in 2020)</i> Diploma (5-year joint degree, 300 ECTS) Electrical &amp; Computer Engineering (ECE) – <i>Current Cumulative GPA: 3.8/4.0 (top 1%)</i> – <i>Major: Computer Science</i> – <i>Thesis: “Personalized Recommendations with Limited Information”. Working paper and thesis. Advisor: Dimitris Fotakis</i></p> <p><b>1st General Lyceum of Hymettus</b> <i>2012–2015</i> Apolytirion, Valedictorian, GPA: 19.8/20.0, top 2% in National Exams (18,971/20,000)</p>
PUBLICATIONS <a href="#">[GOOGLESCHOLAR]</a>	<ol style="list-style-type: none"><li>1. <b>Papachristou, Marios.</b> “Software clusterings with vector semantics and the call graph.” ESEC/FSE 2019. DOI: 10.1145/3338906.3342483. <a href="#">[link]</a></li><li>2. Kostakis, Vasilis, and <b>Papachristou, Marios.</b> “Commons-based peer production and digital fabrication: The case of a RepRap-based, Lego-built 3D printing-milling machine.” T&amp;I, 2014. DOI: 10.1016/j.tele.2013.09.006. <a href="#">[link]</a></li></ol>
WORKING PAPERS	<ol style="list-style-type: none"><li>1. Learning User Interests from Influencers in Online Social Networks. <i>Working paper. To be submitted</i></li></ol>
RESEARCH EXPERIENCE	<p><b>Business Analytics Lab (Undergraduate Researcher)</b> <i>August 2018 –</i> – Conduct research on Machine Learning on Software Engineering – Source Code Embeddings – Software Clustering – Layering Violations – Research funded by the CROSSMINER project, supported by <i>Horizon 2020</i> grant</p> <p><b>Hellenic Center for Marine Research</b> <i>June 2014 – August 2014</i> – Develop a system for marine species identification and morphometric analysis using features and ORB, SIFT and SURF descriptors in OpenCV <a href="#">[repository]</a></p> <p><b>P2P Lab (Remote Research Associate)</b> <i>2013–2014</i> – Publish self-made Lego 3D Printing-Milling machine at age 16 with Prof. Vasilis Kostakis <a href="#">[repository]</a></p>
PROFESSIONAL EXPERIENCE	<p><b>Google Summer of Code 2020 (GeomScale)</b> <i>June 2020–</i> – Enrolled as NTUA Student – Sampling from High-dimensional Log-concave Densities – ODE &amp; SDE solvers – First-order Samplers (HMC, MALA)</p> <p><b>Google Summer of Code 2018 (GFOSS-OTA)</b> <i>April 2018–September 2018</i> – Developed a fully functional project for text mining, cross-linking and automated codification of Greek Legislation using Natural Language Processing Methods and Practices. Project is hosted at <a href="#">3gm.ellak.gr</a> <a href="#">[repository]</a> – Cross-linking into Dynamic Graphs</p>

- Automated Codification
- Custom Version Control System
- Topic Modeling
- Embeddings
- Ranking (PageRank)
- Language Modeling and Legal Text Generation with DNNs
- Greek Legislative Texts Internet Archive Collection [\[link\]](#)
- Project is in active development and receives funding
- Supervise graduate student for Google Summer of Code 2019

## Ratle (Co-founder)

*October 2017–October 2018*

- Bluetooth Signal Denoising with Kalman Filters
- Product tracking inside stores
- Enterprise application for Business Analytics
- Tested at real stores [\[video\]](#)

## TEACHING ASSISTANTSHIP EXPERIENCE

### Undergraduate Teaching Assistant

- Discrete Mathematics (4th Semester) *Spring 2017*
- Programming Techniques (2nd Semester) *Spring 2016*
- Introduction to Computer Programming (1st Semester) *Fall 2016, Fall 2017*

## LANGUAGES

Greek (Native), English (C2), German (B1)

## TECHNICAL SKILLS

**Programming Languages** Python, C/C++, Java, JavaScript/TypeScript, Bash, OCaml, PHP, R, SQL  
**Machine Learning Frameworks** PyTorch, Pyro, Tensorflow Keras, Sklearn, spaCy  
**Data Analysis and Visualization** matplotlib, MATLAB, pandas, Bash  
**Scientific Programming** SAGE, Octave, MATLAB, Scilab, NumPy, SciPy, OpenCV, NetworkX  
**Databases** MySQL, MongoDB, PostgreSQL, Firebase  
**Version Control** Git, Subversion

## HONORS & AWARDS

- New Student Fellowship (first-year). Cornell University.
- Programming Competition *IEEEExtreme 12.0*. Ranked 48th out of 4,000 World-wide (top 1%), 1st in Greece, 13th in Europe (PComplete Team)
- 4th (out of 93) Place in *International Space Engineering Competition at Texas* (CanSat) organized by NASA Goddard and the American Astronautical Society
- 1st Award at “*Crowdhackathon Fintech #2*” for developing a cashierless system for retail shops to eliminate queues by National Bank of Greece
- 2nd Award at the “*be finnovative 2.0 accelerator*” for developing a cashierless system for retail shops to eliminate queues by National Bank of Greece
- ESEC/FSE 2019 ACM Student Research Competition Finalist
- 2nd Place at the “*ECESCON9*” Hackathon
- “*Touramanoglu*” Scholarship by Municipality of Helioupolis & Hymettus
- “*The Great Moment of Education*” Scholarship by Eurobank EFG

## MEMBERSHIPS

IEEE Member, ACM Member

## VOLUNTEERING

- Teaching algorithms courses in National Competition for Informatics Camp
- Google Summer of Code Mentor
- Member of TEDx NTUA 2018 Organizing Committee, IT Team
- Contributor to open-source projects
- Member of Greek Free and Open-Source Software Organization GFOSS-OTA
- Voluntary Blood Donor

REFERENCES	Dimitris Fotakis (Assoc. Professor at NTUA, Thesis Advisor, <a href="mailto:fotakis@cs.ntua.gr">fotakis@cs.ntua.gr</a> )
AVAILABLE	Diomidis Spinellis (Professor at AUEB, ex: Google, ex: GSIS SG, <a href="mailto:dds@aueb.gr">dds@aueb.gr</a> )
UPON REQUEST	Nectarios Koziris (Prof. at NTUA, <a href="mailto:nkoziris@cslab.ece.ntua.gr">nkoziris@cslab.ece.ntua.gr</a> )
	Vasilis Kostakis (Prof. at TalTech, Harvard BKC, P2P Lab, <a href="mailto:kostakis@law.harvard.edu">kostakis@law.harvard.edu</a> )
HOBBIES	Cycling, Bike Restoration, Competitive Programming, Basketball, Reading, Drama
LAST UPDATED	May 23, 2020