

Georgios Sakkas

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EDUCATION

National Technical University of Athens, Greece

Oct. 2012 - Present

- Diploma in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)
- Bachelor and Master Equivalent - *Cumulative GPA: 9.16/10* (Excellent - Expected - Within top 3%)
- Major (Semesters 6th - 10th): Computer Science – *GPA: 9.48/10* (Excellent - Expected)
- Thesis: *Resumption Monad Transformers and their Applications in the Semantics of Concurrency*

4th Lyceum of Kalamata, Greece

Until June 2012

- *GPA: 19.5/20* (Excellent - Top 0.1% nationally) - Graduated with “Distinction” - Valedictorian of class
- Academic Award of Excellence by the Greek Ministry of Education (all three years)

RESEARCH EXPERIENCE

National Technical University of Athens, Greece

Nov. 2016 - Present

- Supervisor: Associate professor Nikolaos S. Papaspyrou
- Research Assistant in *Software Engineering Laboratory*
- Primarily worked on Diploma Thesis and surveyed Program Synthesis (Inductive and Deductive Synthesis, SAT and SMT solvers, Machine Learning methods etc.)

Rutgers, The State University of New Jersey, USA

Jun. - Aug. 2016

- Supervisor: Assistant Professor Maryam Dehnavi
- Worked on High Performance Computing, Parallel Computing, Testing in HPCs (**XSEDE**, Stampede) with the *ParaMathics* group.
- Cache Oblivious Algorithms: Implemented in C and C++ some well-known algorithms in a Cache Oblivious manner and constructed parallel versions of them using **OpenMP**, **Cilk** and **MPI**. Tested these implementations on XSEDE systems for scalability and parallelism.

PUBLICATIONS

Chandrinou S., **Sakkas G.**, Lagaros N. “AIRMS: A Risk Management Tool using Machine Learning” (In review)

- Developed a new system which enhanced the performance of a trading strategy by using deep neural networks and decision trees for classification tasks and improved a portfolio’s profit by 200%.

WORKING EXPERIENCE

PwC, Athens, Greece

Sep. 2017 - Present

- Paid internship in *System and Data Assurance* of the Risk Assurance Services department.
- Implemented a new authorization hierarchy in *SAP* and wrote data analysis scripts for a customer.
- Wrote some scripts to automate some processes in Excel that were needed by the team.
- Attended learnings and tutorials essential for the work done there.

- Taught Mathematics and Programming for three consecutive summers, using my own notes.
- Prepared students for the Greek University Entrance Exams, managed to improve their grades significantly, aroused their interest in Mathematics.

PROJECTS

1. **Compiler.** Created a **fully-functional compiler** for the programming language “Edsger”, a C-like programming language, in a group of two. Mainly used **Python** and **C** and used tools like **PLY** for the lexer and the parser and **llvmlite**, a python-wrapper for **LLVM**.
2. **K-means.** Implemented a **GPU parallel version** of the **K-means algorithm** with five co-students and PhD students. We presented our results in a **HiPEAC conference** in Zagreb, Croatia (April 2017).
3. **Artificial Intelligence.** Group project about a simulation of two robots trying to meet in a specific location inside a 2-D room, avoiding any obstacles. Implemented the **A* algorithm** in **Java**.
4. **Website and Database.** Built a **fully-functional website** about microloans with its own database containing info about the borrowers, the lenders, the loans etc. and running on a **MySQL Server**.
5. **Circuit Boards.** Designed and soldered several circuit boards. The most eminent is an AM receiver.

AWARDS, DISTINCTIONS & CONFERENCES

- 16th (top 1%) at the third and final round of Greek **National Programming Competition**, 2011-2012.
- Top 10% and top 5% globally in IEEE’s 24-hour programming contest “**IEEEExtreme 10.0**”, and “**IEEEExtreme 11.0**” respectively, October 2016 and October 2017.
- Joint **1st place** in EESTech Challenge’s Local Round on **Machine Learning** algorithms.
- Semi-finalist in **Google’s “Code Jam 2016” & “Code Jam 2017”** programming competition.
- Finalist at Greek **Mathematics competition** for three consecutive years and Greek **Physics competition**, 2009-2012.
- Participation with fellow classmates in **Google’s “Hash Code 2016” & “Hash Code 2017”** programming competition.
- Finalist with my team in the “**BUSINESS TALENTS**” **management and decisions contest**, 2013.
- **6th and 7th Greek Electrical and Computer Engineering Students Conference**

SKILLS & COMPETENCES

- Excellent knowledge of several **Programming Languages**, e.g. C/C++, Java, Python, Haskell, JavaScript, Matlab, Bash and good experience with Erlang, Prolog, SML/NJ, PHP, MySQL, HTML/CSS, Assembly languages (80x86, AVR, MIPS).
- Good knowledge of **Networks** and **Network Analysis Programs**, e.g. NS2 and Wireshark.
- Comfortable use of **Microsoft Windows**, **Linux** and **Mac OS**.
- **Greek** (native), **English** (fluent, level C2, TOEFL – 104/120), **German** (level B2)

INTERESTS

- **Sports:** Playing basketball (member of the school Varsity Team) and soccer (member of a 5 to 5 team).
- **Painting:** Drawing, painting and creating art, painted several oil paintings.
- **Photography:** Amateur photographer and still learning about different features of digital photography.
- **Reading:** Reading science fiction books and novels.