Petar Ivanov

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Summary

A new grad with solid background in algorithms and data structures.
Winner of multiple programming competitions. Did several internships in bioinformatics.
Enjoys teaching and communicating science.

Skills

Algorithms: Graphs, Combinatorics, Strings, Geometry, Optimization, Dynamic Programming
Languages: **C / C++ (STL)**, Python (NumPy, SciPy, MatPlotLib), Ruby, MATLAB, Java
Tools: Unix, Bash, Vim, Git, LaTeX

Education

Sep 2013 – Sep 2014 *(exp.)* *(graduated all semesters)*	Bachelor degree in **Computer Informatics** Shumen University, Bulgaria
Sep 2011 — Jun 2013	Master degree *(not accredited)* in **Bioinformatics** // also taught algorithms to biologists Yandex School of Data Mining, Moscow, Russia
Sep 2009 — Jun 2013 *(interrupted by visa issues)*	Specialist degree *(equivalent to Master)* in **Applied Mathematics and Informatics** Moscow State University, Russia // more calculus
Sep 2008 — Jun 2009 *(moved to Moscow University)*	Bachelor degree in **Computer science** // instructor of advanced algorithmics course Sofia University, Bulgaria // mainly discrete maths
Sep 2000 — Jun 2008	**Mathematics and Physics class** // award for most scientific achievements of my year Shumen High school of Sciences, Bulgaria

Additional:

Jan 2011	Vision and Machine-learning Research School, ENS Lyon, France
Jul 2008	Russian Summer Informatics Camp, Kostroma, Russia // 3 weeks of problems and theory
Aug 2007	Physics Camp, Panitsite, Bulgaria // 3 weeks of maths and physics
2004 — 2007	Summer Research Informatics Camp, Varna, Bulgaria // 2-week problem solving
2001 — 2008	Mathematics and Informatics Private School "A&B", Shumen, Bulgaria

Internships

Jul 2013 — Aug 2013
Summer internship on SPAdes open source **genome assembler** // chimera presentation: [PDF]
// proof of concept demonstrated: replication bugs to enhance assembly in open source assembler
supervised by Dr. Pavel Pevzner, Algorithmic Biology Lab, St. Petersburg Academic University

Jul 2012 — Aug 2012
Research internship on verification of probabilistic biological models
// proposed my own topics on 1) virus-bacteria interaction and 2) microcin antibiotics: [Summary]
supervised by Prof. Martin Vechev, Software Reliability Lab, ETH Zurich

Jul 2011 — Aug 2011
Computational Geometry Algorithms Library (CGAL) internship
Google Summer of Code // implemented topological operators on tetrahedral meshes

Teaching

Nov 2013 — now
Students **informatics competitions** trainer // sketching an algorithmic textbook
Mathematics and Informatics Private School "A&B", Shumen, Bulgaria

Nov 2013 — Jan 2014
Technical Assistant in a *Coursera* **bioinformatics course** // lectures editing, forum explanations
supervised by Dr. Pavel Pevzner, University of California, San Diego

Aug 2010
Lecturer at school students **informatics camp** // the best informatics camp
Russian Summer Informatics Camp, Saratov

Mar 2008 — Jun 2009
Assistant in **"Design and Analysis of Algorithms"** course // had seminars with my own group
Faculty of mathematics and informatics, Sofia University, Bulgaria

Other work

Sep 2012 — Jun 2013
Microbiological models designer // design, implementation and analysis
Institute of Gene biology, Russian Academy of Sciences

Sep 2008 — Jun 2009
Jury, organizer, tester and author of the problems in **Online programming tournament**
Musala Soft, Bulgaria // mainly discrete optimization problems

Sep 2008 — Jun 2009
Author of problems in all **Bulgarian Tournaments in Informatics** // 4 such competitions
Lecturer in the **National Informatics Camps** // 3 such camps
National Committee in Informatics, Bulgarian Ministry of Education

Jul 2007 — Sep 2007
Developer of a bin-packing **genetic algorithm** for glass cutting optimization
Telepol Net, Bulgaria // appreciating evolution and first algorithm in production

Awards

1st place	"Minko Balkanski" Competition in Informatics '08
11th place	TopCoder High School Finals, West Lafayette, USA '08
1st place	Autumn Tournament in Informatics '07
1st place	Student Competition for the Dean's cup of Sofia University '07
2nd place	International Young Physicists Tournament *(regional, in team)* '06
1st place	"Rumen Grozdanov" Informatics and Mathematics Tournament '06
1st place	Winter Tournament in Informatics '06

- Awarded as a **National Laureate in Informatics**, Bulgaria '08
- Scholarship for **science achievements** of American Foundation for Bulgaria '07–'08
- Participated in the **final rounds** of the Bulgarian Olympiad in Informatics '05–'08
- Participated in the **final rounds** of the TopCoder High School, West Lafayette, USA '07–'08
- Participated in the **final rounds** of "Musala Soft and PC Magazine" competition '07–'08

Activities

- Speak **English**, **Russian** and **Bulgarian**
- Solve **algorithmic problems** // TopCoder, Timus, Rosalind
- Open the mind and the source // GitHub profile
- Founded a project for describing educational systems // students-abroad.info
- Love to hike, bike, orienteer and to run long // **42.195km in 3:43h** – Zelenograd, Russia, Dec 2011
  // **100km in 13:19h** – Vitosha mountain, Bulgaria, Jul 2012