Aleks Navratil

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Education

Awarded 2014	**MSc Mechanical Engineering**, *Columbia University*. Research focus: Nanoscale carbon materials for aerospace 2 conference presentations, 1 paper submission, 1 Provisional Patent
Awarded 2012	**Mathematics/BSc Mechanical Engineering**, *Columbia University*. Double major in Math and MechE

Experience

'14—Ongoing	**Data Scientist**, *Collective Media*, NYC. • Ad-tech data science in midtown Manhattan • Modeling, prediction, analytics and more in R, Python, SQL, and on Hadoop
'11—'14	**Data Engineer/Grad Student**, *Tribo Energy Lab*, Columbia University. • Python/Pandas/NumPy/MatPlotLib on Ubuntu for computational research in graphene • Led a team of 3 engineers to the fastest provisional patent in Lab history (18 weeks)

Internships

Summer 2012	**Data Analytics Engineer**, *Tyco Electronics*, Hershey, PA. • Automated hardware design and industrial measurement tasks using Python 2.7 • My code stopped $370,000 of defective hardware from shipment to the client (Cisco)
Summer 2011	**Project Manager—Intern**, *Traylor Heavy Civil, Underground Division*, NYC. • Managed a 14-week, $400,000 subproject for tunnel boring machine topside support • Saved $285,000 by reducing monthly waste of spare parts from 1.2% of inventory to .01%
Summers 2009 & 2010	**Superhard Materials Engineer—Intern**, *Argonne National Lab*, Chicago. • Led a team of 4 junior engineers developing diamond-like-carbons for jet turbines • Published results of study at international ceramic materials conference
Summer 2008	**Quant Marketing—Intern**, *PrintingForLess.com*, Livingston, Montana. • Wrote ugly JavaScript • A/B tested very badly

Skills

R	Intermediate: 2 years experience, mostly production code, data viz in ggplot
Python	Light intermediate: 2 years experience in 2.7, mostly with Pandas; some Django
Hadoop	1 year experience with Hive, Oozie, Impala, and more
SQL	2 years experience with Postgres, Netezza, Hive, and Impala
Java & C++	Beginner: 1 semester experience each
Mathematica	Intermediate: 2 years experience. Mostly scientific work
Git	2 years experience
ML	Mostly in R with glmnet, some scikit-learn

Achievements & Awards

April 2013	**NSF Graduate Research Fellowship:** Honorable Mention
Feb. 2013	**US Provisional Patent:** Lightweight carbon composite material for aerospace
2010 & 2011	**R. Simperman Endowed Scholarship:** 2-year consecutive winner (A competitive scholarship for undergraduates in Mathematics and the Sciences)
2009 & 2010	**MCM International Mathematical Contest:** 2-year consecutive Meritorious Winner (an international mathematical contest with thousands of entrants)

Personal

CU Ski Team	Team qualified for USCSA Nationals in '12 and '13 in slalom and giant slalom
Interests	Squash, Basketball, Thai food, typography & design
Spanish	Conversational. Spent a summer in Madrid