Alok Tripathy

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Objective

To obtain an internship for the summer of 2017, hopefully in parallel computing or algorithms.

Education

Georgia Institute of Technology | Computer Science | Atlanta, GA | Standing: Junior

- **GPA: 4.0. Faculty Honors: Fall 2015, Spring 2016**
- **Sidney Goldin Scholarship for "outstanding leadership abilities"**

Princeton University | Dual Enrollment | Princeton, NJ | Sept 2014 - May 2015

- **Algorithms and Data Structures, Theory of Algorithms**

Skills

Computer: Java, C, Python, Go, JavaScript, HTML5, CSS3, Linux, OS X,
OpenMP, Git, LaTeX
Algorithms, Parallel Computing, Computer Security, Machine Learning

Work Experience

Research Assistant | Georgia Tech **(Nov '15 - present)**

- Designs parallel and streaming graph algorithms.
- Implements and run experiments for graph algorithms on multi-core systems in C.
- Works in High Performance Computing Lab.

Teaching Assistant | Georgia Tech **(Jan '16 - present)**

- Works for the Algorithms and Data Structures course at Georgia Tech.
- Leads weekly recitation lessons and office hours.
- Grades weekly programming assignments in Java.

Computer Security Research Intern at Sandia National Labs | Livermore, CA (Jun '16 - Aug '16)

- Worked in Sandia's Titan Center for Cyber Defenders program.
- Implemented distributed cache coherency protocol in Go.
- Automated function summary generation for symbolic execution in Python.

Software Developer Intern at Bloomberg L.P. | Princeton, NJ **(Feb '15 - Jun '15)**

- Designed and implemented machine learning features to extract tables from PDF files in Java.
- Helped design framework for representing PDF files internally.
- Wrote machine learning software that is now in Bloomberg's production environment.

Honors

13th Nationally - Computer Security Awareness Week Capture-the-Flag College Division
17th Internationally - Codegate Capture-the-Flag Final Round, Seoul, South Korea
USA Computing Olympiad Gold Division (highest at the time)

Projects

StreamingBC - HPC Lab **(Nov '15 - present)**

- Heavily optimized streaming betweenness centrality computation in C.
- Improving load balancing for parallel streaming BC algorithm.
- Project to be integrated into Georgia Tech STINGER open-source project.

Minimega - Sandia National Labs **(Jun '16 - Aug '16)**

- Emulates networked environment with virtual machines.
- Worked on distributed cache coherency protocol.
- Integrated into Sandia open-source project.

Vearch - PennApps XI **(Jan '15)**

- Made server download and organize videos with Node.js
- Created responsive user interface with socket.io
- Project placed in top 30 among all 224 projects.

Leadership

Co-Founder and VP at High School CTF (Apr '14 - Jun '15)

- 2000+ person high school computer science competition.
- Wrote problems and got sponsors (Facebook, Bloomberg, Trail of Bits).

Co-Founder and VP of CS Club **(Sept '14 - Jun '15)**

- Gave lectures on algorithms and computer security.
- Organized participation in competitions.

Teaching Assistant at Program for Algorithmic and Combinatorial Thinking **(Jun '14 - Jun '15)**

- Mentored students in discrete math and theoretical CS.
- Studied randomized algorithms and machine learning.