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SWAMINATHAN SIVARAMAN

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EDUCATION

Master of Science **Stony Brook University, New York** **Aug 2016 - Present**

- Major in Computer Science. GPA - 4.0 (Expected graduation - January 2018)
- Current coursework - Operating Systems, Artificial Intelligence, Analysis of Algorithms, Computational Biology

Bachelor of Engineering **Govt. College of Technology, Coimbatore** **Aug 2009 - Jun 2013**

- Major in Electronics and Communication Engineering; Minor in Computer Science. GPA - 8.83/10
- Awarded "First class with distinction" title
- Undergraduate coursework in Computer Science - Algorithms & Data Structures, Operating Systems, C and C++ Programming, Advanced Computer Architecture, Computer Networks, Wireless Networks

EMPLOYMENT

Senior Member Technical **D. E. Shaw & Co.** **Jun 2013 - Jul 2016**

- Helped deliver the High-Frequency Trading(HFT) system of the firm on a monthly release cycle and built robust automation frameworks for testing it, resulting in higher P&L
- Ran the firm's trading algorithms through test trading systems and analyzed their behavior; debugged and fixed issues in the code (Languages - Python, Java and Perl)
- Owned many components of the trading system and became the point-of-contact for them
- Developed a Python API to manage test trading systems from scratch, increasing productivity **by over 50%**
- Developed a large automation framework that tested Linear Programming algorithms using a Python-to-Java RMI interface. This **automated over 1000 test cases**, and the framework was also used in other projects

SKILLS

- **Languages:** Python, Java, Perl, C, C++, Bash, JavaScript, XML, HTML, CSS, Awk
- **Technologies:** Linux, Git, MATLAB, Eclipse

TECHNICAL EXPERIENCE

Projects

- **Trfs** (2016). Linux file system that traces and records all filesystem operations. C
- **Syscall Vectorizer** (2016). Linux module to support per-process system call vectors (overrides). C
- **Xmergesort** (2016). Linux system call that sorts a given set of files. C
- **Student Feedback Summarizer** (2016). Unsupervised learning approach to summarize student course feedback responses using Integer Linear Programming with Soft-Compute. Python
- **Human Motion Detection and Identification in Videos** (2013). System that analyses a video stream and identifies and tracks human beings using a combination of Adaptive Background Modeling, a Histogram of Oriented Gradients approach and a Support Vector Machine. MATLAB
- **CHAOS - Cognitive Hand in Automobile Orchestrating Systems** (2012). Road traffic controller that dynamically allocates signal times based on vehicular load using a custom algorithm. C, 8051 MCU

AWARDS

- **Appreciation Award:** Received at D.E.Shaw & Co. for quick turnaround time and exemplary performance
- **First Prize, CS Projects:** CHAOS was awarded the first prize at INFOREA, a national-level technical symposium
- **First Prize, Code Debugging Competition**: Awarded in an intra-college competition, among 500 participants

ADDITIONAL EXPERIENCE

- **Pet projects:** Cows-And-Bulls word game (Python), CGPA Calculator (Android app)
- **Mentored** two people at D.E.Shaw & Co.
- Secured **97.27 percentile** out of 200,000 candidates in CAT (2012), one of India's toughest quantitative exams