

Rafi Akhand Hasib

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[inquire for phone number]

- EDUCATION** **University of Pennsylvania**, Bachelor of Science in Engineering (BSE) 9/2004 – 5/2008
School of Engineering & Applied Sciences, Philadelphia, PA
- Major: Electrical Engineering
 - Minors: Computer Science, Mathematics, Music
- COURSEWORK**
- Senior Design: Color inkless blackboard prototype with memory using new materials technology
 - Engineering: Digital Signal Processing, Signals & Systems, Embedded Systems/Microcontrollers, Dynamic Systems, Digital Logic & Design
 - Computer Science: Computer Architecture, Data Structures & Algorithms, Operating Systems, UNIX/Linux Skills, Python Programming
 - Music: Psychology of Music, Theory I – IV, Honors in Music Theory, 18th Century Counterpoint
- EMPLOYMENT**
- Merck & Co.**, Automation Engineer 6/2008 – Present
Vaccine Manufacturing IT for Sterile Operations, West Point, PA
- System expert for inspection machines with computer vision, image processing, process control
 - Programmed with logic controllers, distributed control systems, servers, operator interfaces
 - Increased inspection machine efficiency from 56% to high of 92% capacity, for over \$10M savings
 - Six-time recipient of Merck Award of Excellence for optimization and reduction of false rejects
- Ketterer Digital Logic & Design Laboratory**, Teaching Assistant 9/2006 – 12/2007
Penn Department of Electrical & Systems Engineering, Philadelphia, PA
- Designed and evaluated homework assignments/exams focused on digital logic and design
 - Guided students in a weekly project-oriented course
 - Use of schematic design in Xilinx software, using schematics, ABEL, & VHDL programming
- Merck & Co.**, Information Services (Intern) Summer 2007
Global Desktop Management, Blue Bell, PA
- Project DARWIN: Windows XP/Vista testing, development, and documentation
 - Application Inventory: Data mining to individually classify Merck's 50,000+ applications
 - Merck College Night: board member and web designer for outreach to employees' children
- Lockheed Martin**, Computer Systems Engineer (Intern) Summer 2006
Maritime Systems & Sensors Division, Moorestown, NJ
- Completed computer infrastructure test performance measurements for hardware using Unix
 - Performed benchmarking for naval computers, hardware support for operating environment
- Information Technology Advisor Staff**, Manager (2007-2008) 9/2004 – 5/2008
University of Pennsylvania, College House Computing, Philadelphia, PA
- Managed & supervised the IT staff and computer lab for college house dormitory
 - Troubleshoot computer problems (hardware/software, anti-virus, networking issues)
- Memorial Sloan-Kettering Cancer Center**, Computer Science Intern Summer 2005
Medical Physics Department, New York, NY
- Designed an interactive program for medical image processing using DICOM
 - Self-taught Visual Basic for Applications to design the interface
- SCHOOL ACTIVITIES**
- Science and Technology Wing**, Residential living learning program 9/2004 – 5/2008
- Student-run organization, consisting primarily of science and engineering students
 - Member-at-large and active alumnus in the Continuum, the organization's governing body
 - Self-motivated projects, Rube Goldberg competitions, & dinner discussions with faculty
- Web Developer / System Administrator**, Various on and off-campus groups 9/2005 – 5/2008
- Major projects: homepages for Penn ESE Labs, Local 99 Public Access TV, Penn Glee Club
 - Examples available upon request and showcased at homepage (indicated above)

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SCHOOL	Managers Board , <i>King's Court English College House</i>	9/2007 – 5/2008
ACTIVITIES <i>(continued)</i>	<ul style="list-style-type: none">• Collaborated to organize weekly in-house events for dormitory residents• Proactively designed brochures to attract incoming new freshmen and campus residents	
	Penn Glee Club , <i>The university's premier all-male choral ensemble</i>	9/2004 – 5/2007
	<ul style="list-style-type: none">• Served as Assistant Conductor/Director, Music Arranger, Publicity Manager, Sys. Admin.• Helped plan/direct rehearsals and wrote original music for the chorus and pit orchestra• Arranged music for and directed the Penn Pipers, a subset a cappella octet	
	Penn Wind Ensemble , Clarinetist	9/2005 – 5/2007
MUSIC	Barbershop Harmony Society , http://www.barbershop.org	1/2009 – Present
	<ul style="list-style-type: none">• Competed with the North Pennsmen Barbershop Chorus to win two divisional contests• Attended Harmony University, taking classes in theory, physics of sound, and audio recording	
	Glen Burtnik & Friends , http://www.glenburtnik.com	6/2007 – Present
	<ul style="list-style-type: none">• Arranged music for professionals with supporting winds and string instruments• Performed trombone and saxophone in biannual rock concerts	
	Montgomery County Concert Band , Trombonist	8/2008 – Present
	North Plainfield High School , Marching Band Drill Writer	Summer 2007
	North Brunswick Township High School , Marching Band Drill Instructor	Summer 2004
SKILLS & EXPERIENCE	Programming: Java, C, C++, Unix, MATLAB, Python, VHDL, Visual Basic for Applications / .NET Software: Allen-Bradley, DeltaV, Cognex Insight, ATS SmartVision, Xilinx, Microsoft Office Design: HTML, CSS, Dreamweaver MX, Photoshop, Illustrator, Javascript Operating Systems: Windows (XP/Vista/7), Mac OSX, Linux (Ubuntu 10.04) Musical Instruments: Clarinet (15 years), Trombone (9 years), Voice (8 years)	