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RIDDHI MITTAL

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EDUCATION

Stanford, CA — **Stanford University** — **Fall 2007 - Present**

- June 2011 Candidate for **B.S. in Computer Science** (Systems track). **Cum GPA**: 3.65, **Major GPA**: 3.81
- June 2012 Candidate for **M.S. in Computer Science** (Systems track).
- Microsoft Scholar 10-11, Google Anita Borg Scholarship Finalist 10-11, Cap and Gown (Women's Honor Society) active 10-11.
- **CS Coursework**: Distributed Systems, Operating Systems, Language Processing, Parallel Programming, Compilers, Machine Learning, Computer Networks, Databases, Artificial Intelligence, Computer Security, iPhone Programming, Web Programming and Security, Object-Oriented Systems Design, Robotics, Computer Graphics, Algorithms, BioComputation, Data Visualization

New Delhi, India — **Delhi Public School, RKPuram** — **7/05 – 3/07**

- Grade 12 National exams – 1st position in New Delhi among 60,000 students (Science stream) • Percentage - 96.8%

EMPLOYMENT

Resident Computer Consultant — **Storey House, Stanford University** — **9/10 – 6/11**

- Responsible for supporting residential network connections for computers and other devices, debugging computing problems, and promoting computer awareness and proficiency.

Software Developer Intern — **Microsoft Corporation** — **6/10 – 9/10**

- Interned on the SQL Gray Systems Lab (advanced database projects) under supervision of Principal Developers.
- (C, C++): Designed and implemented a lock-free, multi-threaded, incremental, variable-length heap allocator with concurrent parallelizable compaction for efficient memory usage (addressing fragmentation), for an insert-delete workload.
- Tested the allocator against general-purpose, production allocators like Rockall, the SQL allocator, and a lock-free fixed-length allocator on multiple fronts like performance, memory consumption, scalability and analyzed pros and cons of each.
- Reached out to every manager until Ballmer up in the organization chart and talked about industry direction and MS strategy.

Co-Chair of Technology — **Associated Students of Stanford University** — **9/09 – 6/10**

Executive Cabinet - Lead team of 5 students. Project manager for initiatives.

- Coded a room reservation system to replace paper reservations. Expanded to all rooms due to its popularity.
- Coded server side for managing input and scheduling of image feeds that will be used by client terminals for display.
- Leading a tech consulting project wherein we answer website implementation questions for Stanford student groups.

Software Developer Intern — **Stottler Henke Associates Inc** — **6/09 – 9/09**

- *Stottler Henke designs Artificial Intelligence solutions for planning, scheduling, education, decision support etc.*
- Project (C++ and Matlab): Applied Probabilistic Road Maps to solve route-planning for multiple satellite beam projections on domes. Added post-processing compression to make planner find the most efficient routes. Designed API for compatibility.
- Project: Developed prototype for automatic parameter selection, improving software performance by as much as 50%.
- Written technical descriptions of projects were incorporated into final client report and proposal for next phase.
- "We were awarded that full time development contract largely as a result of her efforts." – Richard Stottler, President.

Sophomore College Assistant — **'Great Ideas In Computer Science', Sophomore College** — **09/09**

- Teaching and Resident Assistant for 14 students. Helped with material, problem sets, grading, final projects.

Section Leader — **CS Department, Stanford University** — **1/08 - Present**

- Hired through competitive class-agnostic selection process (>50 total applicants). One of only three freshmen hired.
- Taught 11 student section, graded assignments, midterms, and held weekly office hours. Also taught online section.

TECHNICAL EXPERIENCE

Projects

- **Distributed Systems (Team Design, Individual Implementation):** Designed and coded a distributed (no central server, no single point of failure), multi-player game of Mazewar. Designed and coded a transactional, replicated file system over UDP.
- **Networking (Individual):** Coded traceroute, a minimum Reliable Transport protocol, a router with a static routing table, dynamic routing using RIP and a NAT enabled router as part of projects for CS 155 and CS 144.
- **Object Recognition (Team):** Designed and coded object recognition algorithms (template matching, decision trees, boosting, feature engineering) using OpenCV to recognize 5 types of objects in a video for the CS221 Final project.
- **Operating Systems (Team):** Coded the most challenging parts of the CS140 team projects like subdirectories for file system and paging and memory-mapped files for virtual memory. Submissions passed all tests. Grade received: A

Languages and Technologies

(fluent) C, C++, Java, (other) SQL, PHP, Python, JavaScript, Ruby on Rails, Objective-C, MATLAB, R, Verilog, OpenGL, Scheme

LEADERSHIP ACTIVITIES

- **BASES Social Entrepreneurship Challenge 2009 Semi-Finalist Team Leader:** Led team of 5 students. Business plan used mobile technology to make education accessible. Reached semi-final round of a $50K competition (19 of 120 teams).
- **ASES Venture Weekend 09 Software Developer Entrepreneur:** Brainstormed a sustainable mobile startup venture. Coded an iPhone app during the weekend and presented to VCs thereafter. Went on to form startup as 4 co-founders.
- **Stanford Association for Computing Machinery Core Officer 09-11:** Started extremely successful CS student Tech Talk event.
- **Stanford Women in Business Co-Vice President Strategy and Development 09:** Built partnerships with other business groups, piloted new event ideas. Created process to make SWIB alumni network useful to current members.
- **Stanford Pre-Business Association Director of GSB Relations 09:** Organized the annual GSB Mentorship program.