

# JOY DUTTA

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## Summary

Extensive front-end software engineering experience in the last few years.

I have been building a BI product from ground up using the latest JS framework (Angularjs) and have never been more excited about the future of UI/UX development for the web. Prior to that, I built a feature rich and snappy web experience using google closure at Zoosk which enjoyed explosive growth during the time. During my tenure at Yahoo!, I developed 2 high-impact products at Yahoo! Finance, namely the streaming quotes and finance autocomplete.

My bottomline ability is creative problem solving, architecting complex products from ground up. Having grown up hearing impaired with a passion for continuous learning, I am up for any engineering challenge in building reliable, responsive and delightful user experiences.

## Specialities

Software design, algorithms, performance optimization.

Javascript (including angularjs, closure, etc), HTML5, CSS3 (including LESS), Java, C/C++, php, git

## Experience

**Scaligent**—Redwood City, CA

Member of Technical Staff (Dec 12 - Current)

- Bootstrapped a brand new BI product and developed the foundation in a 2-person team using Angularjs. Used tools including Highcharts, SlickGrid, Karma, LESS and gruntjs.
- Designed and developed a smart autocomplete UI for natural language business queries.
- Developed scaligent.com as a SPA (single page app) demonstrating the expressive power of Angularjs framework.

**Zoosk**—San Francisco, CA

Software Engineer, Javascript (Jan 11 - Dec 12)

- Developed key features of the Zoosk web experience using google closure javascript framework.
- Mentored new hires getting up to speed, and wrote tools to enable others code faster.
- Continuously learning better designs to write less code and deliver a snappy user experience.

**Yahoo! Inc**—Sunnyvale, CA

Technical Yahoo! (Jan 06 - Dec 2010)

- Architected two high-impact products for the Yahoo! Finance website - the streaming quotes and finance autocomplete.
  - Prototyped and implemented the first production frontend code for streaming quote data in browser, closely working with another engineer integrating a comet-based streaming model. Also converted the static portfolios to be streaming as well.
  - Implemented the finance autocomplete feature from ground up, using ternary search tree for superfast webservice performance.
- Developed multiple features and modules for the Global Finance project which drives multiple localized versions of the finance site powered by one codebase.
- Developed and maintained a wide variety of internal components and webservice. The complex finance architecture made every small project an exercise of creative problem solving and making the best use of time and resources.
- Contributed a few prototypes and ideas in the internal hack days. They include streaming charts on iphone, portfolio charts,

and a couple of productivity tools like website comparator and context-aware bash shell autocomplete.

Technology/processes: Agile scrum, c/c++, javascript, yui, ajax, html/css, perl, php, xslt, continuous integration with hudson

**Yahoo! Inc**—Sunnyvale, CA  
Summer Intern (Summer 05)

- Developed the first prototype of a Financial Trading Decision Engine - an experimental tool to make informed decisions to buy and sell stocks using technical indicators. Used C++, Javascript
- Developed the first prototype of streaming quotes in browser. Used Javascript, Ajax

**Computer Science Dept, SUNY Stony Brook**—Stony Brook, NY  
Graduate Assistant (Spring 05, Fall 05)

- Developed the Stony Brook University online graduate application database and web application in a team of two. Extensive use of JSP, Servlets, JavaBeans and JDBC as frontend, and Oracle as the RDBMS backend.

**Secure Systems Lab, CS Dept, SUNY at Stony Brook**—Stony Brook, NY  
Research Assistant (Summer 04)

- Added features and scalability to RPMSHield, a secure software installer for RPM packages in Linux.

**Strand Genomics**—Bangalore, India  
Software Engineer (June 02 – July 03)

- Development of custom high-end software tools for datamining in the field of bio-informatics:
  - **Sarani Goldminer** : Designed and implemented the front end of an Oligo Design Tool using Java. Used Java Swing for the GUI and JDBC to interface the MySQL database backend.
  - **Abgenix** : Implemented a pluggable, web-based Parameter Setting Library for efficient management of bio-algorithm parameters. Used Java, XML and XPath.

**Cisco Systems**—Bangalore, India  
Software Engineer (July 01 – May 02)

- Worked in the **IOS** support group for the high-end **Cisco 7500** series routers. Had first exposure on the internals of a Real-Time OS. Reproduced and fixed several bugs in different versions of the IOS.

**MicroSystem Foundations**—Calcutta, India  
Freelance Developer (Summer 2001)

- Designed and implemented a **Fingerprint Recognition based access control system** from ground up using a keypad, LCD, fingerprint module and smart card reader, with all the device drivers for the components written in C. The company generated substantial revenue from this product.

**MicroSystem Foundations**—Calcutta, India  
Summer Intern (Summer 2000)

- Developed a **Network management suite** in VB to communicate with barcode based card readers and collect attendance data from a complex network of such devices. The company generated substantial revenue from this product.

## Other projects

Outside work I keep myself involved in side projects to learn new technologies. I have helped a friend develop a virtual classroom product on top of a few open source projects. I was also a founding engineer of a stealth mode startup that worked on NLP based pattern extraction from current trending topics.

My personal coding projects are in <http://github.com/jdutta>.

## Education

SUNY at Stony Brook—Stony Brook, NY  
MS in Computer Science (August 2003 – Dec 2005)

Indian Institute of Technology (IIT)—Kharagpur, India  
B.Tech in Computer Science and Engineering (Sep 1997 – May 2001)

## Technical Reports

Paul Fodor and Joy Dutta - **A Systematic Approach to Web-Application Development, 2006**. Report available online: <http://arxiv.org/pdf/cs/0703080>

Paul Fodor and Joy Dutta - **Generating (DNA and Protein) Motifs from Profile Matrices**, (work under supervision of Prof. Steven Skiena) 2005. Code and report available online: <http://ewl.cewit.stonybrook.edu/pfodor/misc/motifs>

## Academic Achievements

All India Rank of **696** in the prestigious **IITJEE** exam, 1997  
State Rank of **13** in the **West Bengal JEE** exam, 1997

## Background

My turn-ons are great designs that solve a common problem elegantly and frugally. Do-It-Yourself projects are a passion from an early age, being raised in a very small town in India. I learnt to design and build my own gadgets out of available recycled materials. The creative pursuits continue to this day, in many different forms. Programming and technology is something I breathe everyday for the infinite possibilities of what can be done with them.

Making sense of the world around me and how to put my skills to optimum use is my mantra of life.