

SANDIP AGRAWAL

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Engineering leader with 9+ years of full stack software development experience with an emphasis on building and scaling web apps and backend services at both startups and large organizations. Strong product sense with ability to balance the business and engineering tradeoffs.

EXPERIENCE

Sr. Software Engineer, DriveInformed

Jan 2017 - Present

Technologies: Ruby on Rails, Python, JavaScript (React), HTML/CSS, Postgres, Redis

- Served as an engineering leader, working directly with the CEO and playing a critical role on all engineering and product decisions
- Designed, built and maintained core product features including:
 - A machine-learning based document classifier and extraction framework to automatically classify financial documents and extract relevant information
 - A credit decisioning engine to prequalify a credit applicant across multiple lenders and thousands of autos in real time
 - Sets of APIs for third parties to use our credit decisioning engine and stipulation analysis product
- Successfully hired 2 engineers by defining and leading the engineering hiring process, sourcing candidates and taking 100+ introductory phone screens
- Helped implement engineering best practices, like code reviews, automated tests and arch reviews

Software Engineer, Google

Mar 2014 - Feb 2016

Technologies: Python, MapReduce, JavaScript (Google Closure), HTML/CSS

- Built the machine learning pipeline to extract timed lyrics from the audio of a song
- Designed the initial system architecture and led the frontend development of Youtube Music Insights (<https://charts.youtube.com>), a responsive web app to view and analyze music listening data on YouTube segmented by artists, locations and time period
- Collaborated with a PM and designer to brainstorm and prioritize features, define roadmaps and launch the Youtube Music Insights product

Co-Founder, MCQmania

Mar 2012 - Dec 2016

Technologies: Python (Django), JavaScript, HTML/CSS, Postgres

- Built an adaptive e-learning platform to prepare students for their medical & engineering school entrance exams in Asia
- Developed partnerships with leading institutes and high schools in Nepal to streamline product distribution reaching 5000+ daily active users

Software Development Engineer, Yahoo

Oct - Dec 2013

Technologies: JavaScript (Node, Angular), HTML/CSS

- Prototyped a fast and scalable premium message board system for Yahoo! Sports properties
- Built and published an NPM module to interact with Yahoo!'s backend datastore system

Full Stack Software Engineer, Hitpost (acquired by Yahoo)

Aug 2012 - Oct 2013

Technologies: Python (Django), JavaScript, HTML/CSS, MongoDB, Redis, Solr, AWS

- Designed scalable backend APIs using a mix of MongoDB, Redis, Solr and graph databases for real-time mobile sports apps (Sports Bet and Fantasy Football Polls) on both iPhone and Android

- Created an analytics tracking engine and admin site to analyze various app metrics and perform admin actions like creating custom bets
- Built different game mechanics like levels, power-ups, and missions to increase user engagement

Software Engineer, TriTek Solutions (acquired by Perficient)

July 2010 - Aug 2012

Technologies: Java, C#.NET, JavaScript (ExtJS), HTML/CSS, MySQL

- Developed various enterprise web-based applications involving content and business process management like Incident Reporting System, Payroll System for fortune 500 clients

Engineering Intern, Boston Scientific Corporation

June - Aug 2009

- Automated the data analysis process and built a web-based visual data presentation tool to view and analyze ~800,000 medical product performance data reducing previously day's worth of engineers work to few seconds. Noted by VP and directors as the best intern project they had ever seen.

Pratt Research Fellow: Phone Point Pen

2009-2010

- Prototyped a system that allows the user to hold their phone like a pen and write messages and draw diagram in the air; published two peer-reviewed research papers as first author and featured in Scientific American, Guardian UK, Slashdot, Engadget, etc.

Image Analyst, Duke Clinical Institute

July - Dec 2007

- Developed an image analysis program using wavelet transformation based algorithms in MATLAB to understand the effects of chemicals on cells and making it trivial to perform custom analysis

EDUCATION

Georgia Tech, 2015

M.S. in Computer Science with specialization in Machine Learning, GPA: 4.0

Duke University, 2010

B.S.E. in Electrical & Computer Engineering, Biomedical Engineering, GPA: 3.85

University of Geneva, 2008

Study Abroad -- International Business and Globalization

ACHIEVEMENTS

Justin Wickett, Sandip Agrawal "System and method for stipulation collection using SMS and mobile device cameras with real-time analysis of documents". U.S. Patent 20190340428, filed October 2018. Patent Pending.

Sandip Agrawal, Ionut Constandache, Sharavan Gaonkar, Romit Roy Choudhury "[Using Mobile Phones to Write in Air](#)". ACM MobiSys 2011

Sandip Agrawal, Ionut Constandache, Shraavan Gaonkar, Romit Roy Choudhury "[PhonePoint Pen: Using Mobile Phones to Write in Air](#)". ACM MobiHeld (with ACM Sigcomm) 2009

Pratt Research Fellow, 2009–2010

Duke Startup Challenge, Runner Up (\$5000 prize), 2010

The Charles Ernest Seager Memorial Award (Best research project in graduating class), 2010

Hoffmann + Krippner Excellence Award (Excellence in field of HMI applications), 2009