

# Prateek Agarwal

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## TECHNICAL SKILLS

- **Programming Languages:** Python, Go Templates, Java, Ruby, C++
- **PaaS/CI/CD tools:** Kubernetes, Mesos, Helm Charts, Jenkins, Ansible, Zipkin
- **Monitoring/Logging Tools:** Appdynamics, Prometheus, Grafana, Splunk
- **PaaS Systems:** AWS (Terraform, Kops), Bare-Metal (Nutanix, Kismatic)
- **Datastores/Queues:** Cassandra, Kafka, ElasticSearch, Zookeeper, Redis, Consul

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## PROFESSIONAL EXPERIENCE (9+ years)

- Current - **Staff Software Engineer**, *Appdynamics, Inc.*, Bangalore, IN.  
Nov. 2017
- Part of the Common **Platform** Services team.
  - Architected the **Kubernetes deployment** framework to make it multi-tenanted.
  - Designed workflows to easily provision new Kubernetes clusters on both On-Premise and AWS.
  - Maintain and provide tooling around Kubernetes workflow - to optimize resource utilization.
  - Technologies got to work on: **Kubernetes, Kafka, Helm, Kops, Python, Jenkins, Ansible**
- Nov - Apr. 2017 - **Senior Software Engineer**, *Appdynamics, Inc.*, San Francisco, USA.
- Built the Kubernetes deployment framework to break monolith Platform services into micro-services.
  - Built Monitoring/Alerting/Logging solutions to efficiently monitor deployments on Kubernetes.
- Apr. 2017 - **Software Engineer**, *Yelp, Inc.*, San Francisco, USA.  
Jan. 2015
- Part of the **Distributed Systems** Infrastructure team.
  - Provided tooling around NoSQL datastores - **Cassandra, ElasticSearch**.
  - Built **Zipkin** (Distributed tracing) infrastructure at Yelp to debug service latencies.
  - Wrote `pyramid_zipkin`, `swagger_zipkin` packages to easily integrate Zipkin with existing services.
  - Co-authored `bravado` package to integrate python services with Swagger v2.0 specifications.
  - Won **hackathon award** for building Yelp's onboarding tracker tool.
  - Technologies got to work on: **Python, Cassandra, Elasticsearch, Redis, Swagger2.0, Zipkin**
- Aug. 2014 - **Software Engineer Intern**, *Yelp, Inc.*, San Francisco, USA.  
May, 2014
- Wrote `swagger-py` to build a dynamic client library for services using swagger v1.2 specifications.
  - Technologies got to work on: **Python, Swagger v1.2, Twisted**
- Jul. 2013 - **Software Development Engineer II**, *Flipkart*, Bangalore, IN.  
Jun. 2012
- Wrote a ruby gem *Morsel* to traverse through active record trees to purge old records. It helped in limiting the production database size and keeping the data clean.
  - Was part of the Supply chain team which remodelled and built a new one from scratch. It now scales to around 10X compared to the older system.
  - Technologies got to work on: Ruby, Java, Pig, Active Records, MySQL
- Jul. 2012 - **Software Development Engineer I**, *Flipkart*, Bangalore, IN.  
Jun. 2011
- Wrote a ruby gem *Morsel* to traverse through active record trees to purge old records. It helped in limiting the production database size and keeping the data clean.
  - Was part of the Supply chain team which remodelled and built a new one from scratch. It now scales to around 10X compared to the older system.
- Jun. 2011 - **Software Engineer**, *IBM Software Labs*, Bangalore, IN.  
Jul. 2009
- Handled high priority issues for JDBC client driver for IBM Informix database.
  - Was awarded Smart CADian award for resolving an obscure deadlock situation, making Informix JDBC driver more robust.
  - Technologies got to work on: **Java, IBM Informix, IBM DB2**

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## GITHUB PROJECTS

- **prat0318/json\_resume** - Details at [prat0318.com/json\\_resume](http://prat0318.com/json_resume)
  - Ruby library to generate resume from JSON to HTML, pdf, md, tex formats.
  - Around 1K stars on Github. Front page of Hacker News
  - Current resume has been generated using json\_resume.
- **prat0318/2048-tetris** - Live at [prat0318.com/2048-tetris](http://prat0318.com/2048-tetris)
  - Wrote a Tetris variant of 2048 game, 1M+ unique visits
  - Front page of Hacker News, mentioned in TechCrunch.
- **Yelp/pyramid\_zipkin** - Zipkin integration with Pythonic services.
  - Built pyramid\_zipkin as a wrapper to bind Pyramid based services with Zipkin.
  - Also wrote swagger\_zipkin as a zipkin decorator over swagger clients.
  - Authored an engineering blog post: Distributed Tracing at Yelp.
- **Major contributor to swagger packages** - swagger-py, bravado, pyramid-swagger
  - Wrote swagger-py as part of my internship at Yelp - currently used in production.

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## TALKS/BLOG POSTS

- OpenZipkin/Distributed Tracing Conf [SF, July 2016] : How Zipkin works @ Yelp
- Engineering Blog Post [Mar. 2016] : Distributed Tracing at Yelp

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## EDUCATION

2015 **Master of Science, Computer Science**, *University of Texas at Austin*, GPA: 3.73/4.

2009 **Bachelor of Technology (Hons.), Computer Science**, *Indian Institute of Technology, Kharagpur (IN)*, GPA: 8.91/10.

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## RESEARCH EXPERIENCE

May-Jan '15 **Graduate Research Assistant**, *Texas Advanced Computing Center, UT Austin, USA*  
[part-time]

- Added docker integration to web portal [digitalrocksportal.org](http://digitalrocksportal.org) to streamline the deployment process.
- Technologies got to work on: **Python, Django, Docker, Docker-compose, Celery**

Jul. 2008 - **Undergraduate project**, *Sanyog Lab, IIT Kharagpur*.

- May 2009
- Designing and Formal modelling of embedded systems for project Sanyog.
  - Skills Developed: Low level system design, theorem verification using Prolog and Coq
  - Technologies got to work on: **Prolog, Coq, Kernel Level Programming in C**

May 2008 - **Summer Intern**, *Network Systems Lab, IIT Kharagpur*.

- Jun. 2008
- Design and simulation of Pull-based Freshness Schemes in Server-Client Model in C++.
  - Technologies got to work on: **C++**

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## ACADEMIC ACHIEVEMENTS

- Was among the top 5% in the institute merit list of the undergraduate batch at IIT Kharagpur.
- Secured 383rd Rank in IIT-JEE 2005, an exam conducted by Indian Institute of Technology(s).