

# Kunal Baweja

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## Professional Experience

- **Staff Software Engineer, Reddit Inc. (Chat Discovery & Distribution)** May 2023 - Present
  - Developing Community Chat Recommendations for home feed, chat tab & discover tab.
  - Collaborating with product, data science and engineering teams to drive team's roadmap, strategy and engineering planning.
- **Staff Software Engineer, Twitter Inc. (Tech Lead, Notifications Product Engineering)** Feb 2018 - May 2023
  - Product and infrastructure engineering for News, scheduled reminders, recommended content and direct messages notifications etc.
  - A/B testing product and relevance changes for notifications sent out to customers
  - Lead team's technical strategy and project prioritizations with a focus on growth and retention of users on Twitter
  - Experiment & Technical design shepherd for product and infra changes across tech stack
  - Collaborated with PM, Data Science, Design & Legal on Notifications product strategy
  - Mentored engineers on the org towards technical skills and career growth
- **Software Development Intern, Max2 Inc (Internet Edge Services)** Sept 2017 - Dec 2017
  - Developing microservices and applications for edge computing servers processing sensor readings from connected IoT devices.
- **Developer Intern, 1010data Inc (Systems Development Team)** Jun 2017 - Aug 2017
  - Developed cache prototype for storing database files on local disks from persistent public cloud storage. It enables on demand computational resource provisioning in cloud.

## Education

- **Columbia University in the City of New York, USA** Sept 2016 - Dec 2017  
MS in Computer Science
- **Birla Institute of Technology & Science, Pilani K.K. Birla Goa Campus, India** Aug 2011 - May 2015  
B.E.(Hons.) in Computer Science

## Projects & Publications

1. **Hello World: Messaging sans language barriers** [<https://devpost.com/software/hello-world-5v89re>] Sept 2017
  - Messaging app that translates your message's to recipient's language before delivery!
  - Technologies used: Google Cloud Platform, Firebase Realtime Database, Text translation API
2. **Coverage Based Fault Injection Fuzzing** [<https://github.com/akshaynagpal/cbfi>] Jan 2017 - May 2017
  - Detects security vulnerabilities caused by errors in execution environment of a program by simulating and permuting system call failures and analyzing program response/crash.
3. **Frame-Seller** [<https://github.com/bawejakunal/Frame-Seller>] Jan 2017 - Apr 2017
  - Cloud based application for selling photographs. Developed and deployed using AWS API Gateway, AWS Lambda, SQS, SNS, Cloudwatch, Swagger and static frontend hosted on AWS S3.
  - Microservices implemented: email verification, asynchronous order processing and Stripe payments.
4. **Sigma Learn - Lecture to Notes** [<https://github.com/bawejakunal/Sigma-Learn>] Jan 2017
  - Converts audio lectures to transcripts and summary in realtime using IBM Watson and Aylien APIs.
  - It can be helpful for students with hearing impairments and/or other physical disabilities.
5. **A Secure Sharding Protocol for Open Blockchains** [Accepted: ACM CCS-2016] Oct 2016
  - A distributed agreement protocol for committee based blockchains and scaling transaction rates.
  - Weblink: <http://dl.acm.org/citation.cfm?doid=2976749.2978389>
6. **Research Intern at TSUNAMi Center, National University of Singapore** Jun 2015 - May 2016
  - Research projects on secure filesystems, scaling blockchain transaction rates and defending data oriented attacks in linux kernel.
  - Implemented File Inclusion, SQL Injection and XSS tests for a web vulnerability scanner.

## Certifications & Technical Skills

- **Coursera.org Certifications**
  - Python For Everybody by University of Michigan (5 course specialization) [[Certificate Link](#)]
  - Machine Learning Foundations by University of Washington [[Certificate Link](#)]
- **Technical Skills**
  - Scala, Java, Python, Go, C/C++, GraphQL, Hadoop, JavaScript, HTML, CSS, SQL/NoSQL
  - AWS, Google Cloud Platform (GCP), Azure, Docker, Distributed Systems, Microservices