

Kunal Baweja

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Professional Experience

- **Staff Software Engineer, Twitter Inc. (Tech Lead, Notifications Product Engineering)** Feb 2018 - Present
 - Backend product and infrastructure engineering for News, scheduled reminders, recommended content and direct messages notifications etc.
 - A/B testing product surface and content relevance changes for notifications sent out to customers
 - Setting up 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
 - Collaborating with PM, Data Science, Design & Legal on Notifications product strategy
 - Mentoring 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.
- **Research Intern at TSUNAMi Center, National University of Singapore** Jun 2015 - May 2016
 - Developed and tested prototypes for 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.

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

Selected Projects

1. **Hello World: Messaging sans language barriers** [<https://devpost.com/software/hello-world-5v89re>] Sept 2017
 - Developed backend on Google Cloud Platform using Firebase Realtime Database for syncing messages across devices and Text translation API for translating message to receiver's language.
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>

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++, JavaScript, HTML, CSS
 - Mesos, Hadoop, AWS, Google Cloud Platform, Docker, Distributed Systems, Microservices, SQL/NoSQL