

Kunal Baweja

kunal.baweja@columbia.edu | <https://bawejakunal.github.io> | +1-914-689-5240

Education

- Columbia University in the City of New York, USA** Expected Dec 2017
MS in Computer Science, GPA: 4.0/4.0
- Birla Institute of Technology & Science, Pilani K.K. Birla Goa Campus, India** Aug 2011 - May 2015
B.E.(Hons.) in Computer Science

Professional Experience

- Software Development Intern, Max2 Inc (Internet Edge Services)** Sept 2017 - Present
- 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.
- Software Developer Intern, Bentley Systems Inc., India** May 2014 - Jul 2014
- Developed item stock comparison for *Bentley Connect Interoperability Services* API to synchronize data among stakeholders and vendors for infrastructure projects.
- Software Engineering Intern, Bharat Heavy Electricals Limited, India** May 2013 - Jul 2013
- Developed and released *Online Meeting Management System*, used by more than 2000 employees to organize paperless office meetings. Features: email reminders, file uploads and name search.

Selected Projects

- 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.
- 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.
- 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.
- 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.
- 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>
- Authors: Loi Luu, Viswesh Narayanan, Chaodong Zheng, Kunal Baweja, Seth Gilbert, Prateek Saxena

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**
 - C/C++, Java, Python, Go, K(vector programming), JavaScript, HTML5, CSS3
 - AWS, Google Cloud Platform, Docker, Distributed Systems, Microservices, SQL/NoSQL Databases

Links

- Linkedin: <https://www.linkedin.com/in/kunal-baweja>
- Github: <https://github.com/bawejakunal>