

Aniket Pandey

Third Year Undergraduate • Mathematics and Scientific Computing

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EDUCATION

IIT KANPUR, INDIA

B.S IN MATHEMATICS AND
SCIENTIFIC COMPUTING
July 2016-2020 (expected)

K.V R.K.PURAM, SEC-2

AISSCE, CBSE, OVERALL: 94.0%
May 2016 | New Delhi, India

RELEVANT COURSES

Operating Systems (i)
Computer Networks (i)
Data Structures & Algorithms (i)
Computer Architecture (i)
Computer Systems Security
Designing Verifiably Secure Systems (i)
Introduction to Programming
Probability & Statistics
Introduction to Electronics
(i : Ongoing Courses)

ACHIEVEMENTS

AIR 1: FIITJEE FTRE'13, 214/214

AIR 1: KVS-JMO'14. Scored 92/100

AIR 244: KVPY, Sponsored by IISc

AIR 908: JEE Advanced 2016

Qualified RMO'13 from Delhi region

Merit in Indian National Astrophysics
Olympiad, thrice: INAO-14,15,16

Merit in Indian National Junior
Science Olympiad: INJSO-2014
(AIR : All India Rank)

RELEVANT SKILLS

PROGRAMMING

Competent:

C • C++ • Python • Golang

Familiar

Bash • Javascript • Haskell

OPERATING SYSTEMS

FreeBSD • Arch Linux • Ubuntu
Kali Linux • NetBSD • Gentoo

WEB/Frameworks

Django • Full MEAN Stack
Full LAMP Stack • Codeigniter

UTILITIES

Docker • DTrace • \LaTeX • Vim
Git • GDB • Linux Shell Utilities
Kubernetes

WORK EXPERIENCE

GOOGLE SUMMER OF CODE'18 | APR'18 - AUG'18

The FreeBSD Project | Mentor: Dr. Robert N. M. Watson

- Built a self-contained Regression Test-Suite for FreeBSD's Audit Subsystem with a cross-platform support for Darwin OS and x86, ARM, Sparc64, MIPS architectures.
- Contributed more than **500** test-cases for **180** OpenBSM auditable system calls.
- Developed an automation infrastructure for the Test-Suite, which synchronously polls on a clonable special device, /dev/auditpipe, to extract out relevant BSM tokens.
- Completed the proposed work in less than 1/3rd of total duration. Entire Test-Suite with **9000+** SLOC count was pushed to 12-CURRENT production branch. (LINK)

SECURITY ANALYST INTERN | NOV'17 - JAN'18

Lucideus Technologies | Project Manager: Saket Modi, CEO

- Developed and deployed a secure social networking platform in LAMP Stack.
- Assessed its vulnerability against OWASP top 10 attacks and improved the security.
- Extensively used VAPT tools like Metasploit, Wireshark, Xerosploit, Nessus, Maltego.
- Researched cryptographical model implementation in Network & Wireless Security, analysed WEP encryption weaknesses and exploited it using aircrack-ng tool suite.
- Reverse engineered Windows applications to mitigate common security flaws.

FULL STACK DEVELOPER INTERN | FEB'18 - MAY'18

IIT Kanpur - NYC Office | Prof. Manindra Agarwal

- Worked on a scalable polyglot web application with an extensive technology stack.
- Implemented real-time status update feature in the attendance management system.
- Technologies used: DRF, Kubernetes, Elasticsearch, Concourse-CI, Spinnaker etc.

SENIOR EXECUTIVE, WEB TEAM | APR'17 - MAR'18

Stamatics Association, IIT Kanpur

- Developed and deployed the website of Stamatics in Angular (stamatics.org)
- Dockerized the site and maintained the backend with real-time databasing.

Antaragni 2018, IIT Kanpur

- Used the full MEAN Stack for a fest registration portal and its admin control panel
- Technologies Used - NodeJS, ExpressJS, Angular4, MongoDB (full Typescript).

PROJECTS & ACTIVITIES

FORMAL VERIFICATION OF INTEL'S SGX | JUL'18 - PRESENT

Course Project : Designing Verifiably Secure Systems

- Developed a password manager using Intel's Software Guard Extensions Enclave.
- Researched on modelling a formal verification of security features of the application.
- Implemented the Rjindael AES-128 bit enclave encryption in Galois/Counter Mode.

RESEARCH TRACK EXPLORATION | MAY'18 - JULY'18

The University of Texas at Dallas | Prof. Latifur Khan

- Research project on the implementation of Cross-Domain Adaptive Framework for Multistream data classification (COMC) in asynchronous data stream mining.
- Worked on performance benchmarking of an Entity extraction and Geoparser tool, CLIFF-CLAVIN, in its ability to handle multiple concurrent requests. Performance analysis was carried out on Jetstream, a scalable cloud environment for XSEDE.

AUTOMATED NOMINATIONS WEB-PORTAL | MAY'17 - JULY'17

Summer Project | Students' Gymkhana, IIT Kanpur

- Developed a scalable web application for nominations of Students' Gymkhana, IITK.
- Used Django along with Django-Rest-Framework and PostgreSQL database.
- Implemented dynamic heirarchy levels, search feature, django-filter and multiple model versioning in the backend API, extended it to include automated emailing.
- Selected among the **top 6** projects from all SnT clubs to give final presentation.