Srinjay Kumar

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Educational Qualifications

Year	Degree	Institution(Board)	CGPA/%
July'21 (expected)	B.Tech, CSE	Indian Institute of Technology, Kanpur	8.4/10.0
Apr'17	AISSCE – XII	LASEA(Lady Anusuya Singhaniya Educational Academy), Jhalawar (CBSE)	93.0%
Apr'15	AISSE – X	Ramakrishna Mission Vidyapith, Deoghar (CBSE)	10.0/10.0

Scholastic Achievements

- **JEE (Joint Entrance Examination) Advanced 2017**
  All India Rank 765 (among 220,000 candidates)
- **JEE (Joint Entrance Examination) Mains 2017**
  All India Rank 344 (among 1.3 million candidates)
- **Kishore Vaigyanik Protsahan Yojana 2016-17**
  All India Rank 191 SX Stream
- **National Talent Search Examination 2014-15**
  Qualified for National Level

Projects

Server Load and Benchmark Testing *IIT Kanpur*
Advisor : Prof. Debadatta Mishra May'19 - August'19

- Built up a application with many different transactions(register, login, search) with **PHP** server-end using **sqlite** database.
- Confirmed the knee point in the graphical result of load on server in terms of latency time and throughput, with variation of number of users.
- Used **Blazemeter** and **Apachejmeter** for sending concurrent request from multiple threads recording the sequence and benchmarking consecutively.

Blockchain Technologies *IIT Kanpur*
Advisor : Prof. Pramod Subramanyan May'19 - August'19

- Studies about different types of blockchain technologies such as Bitcoin, Etherum and Hyperledger and Self Sovereign Identity **SSID**.
- Ran a simple application based upon nodejs and with the help of Hyperledger Indy.

Fuzzer *IIT Kanpur*
Supervisor Prof. Pramod Subramanyan Sept.'18 - April'19

- Tested Libraries against C libraries using AFL and Libfuzzer.
- Detected crashes for simple login based program with the help of afl.
- Signal testing about the location where the fault occurs.

Skills

Languages : Python, C++, C, Haskell, R
Web Development : Javascript, HTML, CSS, BootStrap
App Development : React, React-Native, Android Studio
General : Latex, Bash, Docker, ApacheJmeter, PHP, MySql, Verilog, Git, MIPS
Design : Autodesk Fusion360, Inventor
Cloud : Google Cloud, Microsoft Azure
Platforms : Windows, Ubuntu

Work Experience

Shopping with OCR *Amazon India*
Software Development Intern April'20 - June'20

- Made an android app using OCR and text parsing to automate shopping with the camera.
- Implemented database using Firebase and used Firebase ML-Kit for OCR and parsing.
- **Technologies Used :** Firebase MLKit, Cloud Firestore, Google Cloud

Course Projects

JVC IC Generator *Compiler Design*
`https://github.com/srinjayk/Compiler-3ACgen` Jan'20 - March'20

- Used the ANTLR4 to parse code Lexically and Syntactically as per the Oracle's specified grammar and using its output to make Graphical format of AST.
- Implemented a Multi-Level Symbol Table for 3AC code(x86) generator in a non-JVM environment with ANTLR4 as Computer based Language Recognizer.

Market Factor Models *Financial Econometrics*
`https://github.com/srinjayk/Financial_Econometrics` Jan'20 - March'20

- Implemented Fama French 3 factor model and Carhart 4 factor model and use it to do market risk analysis.

GemOS *Operating Systems*
`https://github.com/srinjayk/CS_330` August'19 - November'19

- Implemented and tested various operating system designs and optimizations on gemOS such as Process Context, Paging, Caching, Filesystem and Multithreading
- Implemented pipes, multilevel page tables with lazy page allocation scheme, cfork, vfork for smart process creation, and parallelized hash tables using Multithreading.

Position of Responsibility

- **Academic Mentor**, *Counselling Service*
  Mentored fresher students in a first year course CHM 102 in the academic year 2018-19.

Miscellaneous

- Made a **Sudoku Solver** as a part of assignment in Logic course. It made use of **Minisat**.
  Link : *https://github.com/srinjayk/Sudoku_solver*
- **Best Sectional Project** among projects for partial fulfillment for the course Introduction to Manufacturing Processes **TA-201** during academic year 2018-19-I.

Relevant Courses

Introduction to Programming	Discrete Mathematics	Computer Organization	Computing Laboratories - I
Data Structures and Algorithms	Probability for Computer Science	Introduction to Logic	Computing Laboratories - II
Intro. to Machine Learning	Theory of Computation	Operating Systems	Algorithms - II
Multi-variable Calculus	Linear Algebra and ODE	Introduction to Economics	Financial Econometrics
Compiler Design	Computer Networks	Modern Cryptology	Topics in Topology