

# Cheran Senthilkumar

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## Education

**IIT Guwahati** | CLASS OF 2018

B.Tech. in Maths and Computing

Class Representative, 2014 - 2018

President at MATRIX, 2016 - 2017

## Skills

### Programming Languages

Over 50,000 lines: Python

Over 10,000 lines: C++, Go

Over 1,000 lines: Haskell, JS

### Decentralized Technologies

• BitTorrent • ECC • Secret Sharing

### Machine Learning

• Keras • TensorFlow • Torch

### Database Programming

• Neo4j • Redis • MongoDB • SQL

### DevOps

• CircleCI • Helm • Kubernetes  
• AWS • GCP • Docker

## Links

 Github:// cheran-senthil

 LinkedIn:// cheran-senthil

 Codeforces:// c1729

## Coursework

### Mathematics

Optimization

Combinatorics

Graph Theory

### Computer Science

Data Communications

Operating Systems + Practicum

Computer Networks + Practicum

### Finance

Monte Carlo Simulation

Stochastic Calculus

Statistical Analysis + Practicum

## Experience

**Torus Labs** | SOFTWARE ENGINEER

Jul. 2019 – Aug. 2020 | Singapore

Building a distributed private key management solution to allow use of blockchain applications using authentication methods like Google, Facebook, Discord, etc.

**AI Palette** | MACHINE LEARNING ENGINEER

Jan. 2019 – Jun. 2019 | Remote

Deep Learning Engineer at AI Palette, working on solutions for the FMCG industry.

**BlockPunk** | SOFTWARE ENGINEERING INTERN

Oct. 2018 – Jan. 2019 | Remote / Singapore

Blockchain Engineer at BlockStudios, the first decentralized marketplace for anime.

**Goldman Sachs** | SUMMER ANALYST

May 2017 – Jul. 2017 | Bengaluru, India

Interned as a strat with the Investment Management division of Goldman Sachs.

## Projects

**Bitcoin Keygen** | BITCOIN UTILITY FUNCTIONS

Implements ECC in pure Python to generate Private Key-Public Key pairs in various ways. Further supports all utility features required by a Bitcoin node.

**kNight.js** | CRYPTO WEBMINER

kNight implements cryptonight\_v7 and was one of the first free alternatives to coin-hive as a CryptoNight miner built with JS and C/C++ (WebAssembly).

**Run on EC2** | CLI TOOL

Run-on-EC2 is a versatile CLI to quickly execute scripts on an AWS instances.

**PyRival** | COMPETITIVE PROGRAMMING LIBRARY

A pure Python library with optimized algorithms and tools for rapid execution.

## Research

**Bachelor Thesis** | CONGRUENCES OF PARTITIONS

Jul. 2017 – Apr. 2018 | Dept. of Mathematics, IIT Guwahati, India

Worked with Abhishek Tyagi and Dr. Rupam Barman to investigate Congruences of Partitions, specifically pertaining to Rank Differences and Cubic Partition Pairs.

**Summer Research** | NUMBER THEORY

May. 2016 – Jul. 2016 | Dept. of Mathematics, IIT Guwahati, India

Worked under Dr. K. V. Srikanth to investigate the properties of Quadratic Residues. Later implemented a multivariate extension for the Chinese Remainder Theorem.

## Contests

2019	1 <sup>st</sup> (United States)	HashCode Online Qualification Round (71 <sup>st</sup> Globally)
2019	277 / 102,319	ProjectEuler+ on HackerRank
2014	987 <sup>th</sup> (General)	IIT-JEE 2014 (99.93 Percentile)
2013	16 <sup>th</sup> (State)	National Mathematics Olympiad (Top 300 Nationally)