

# 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

**Fluent:** Python, Go  
**Skilled:** C/C++, Bash  
**Familiar:** Haskell, JavaScript

### 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  
🏠 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

### TipTop | SENIOR SOFTWARE ENGINEER

May 2023 - Jan. 2024 | Remote (United States)

### Audius | SOFTWARE ENGINEER

Dec. 2020 - Apr. 2023 | Remote (United States)

Architected and wrote all internal tooling and process surrounding it.

### Chesslang | SENIOR SOFTWARE ENGINEER

Sep. 2020 - Nov. 2020 | Remote (Contract)

Full Stack and DevOps programming related to new features and their deployment.

### Torus Labs | SOFTWARE ENGINEER

Jul. 2019 - Aug. 2020 | Singapore

Worked on Decentralized Server Architecture, OAuth flows for login, DevOps, Automated Testing Frameworks (CI/CD) & Architecture, and Deployment Scripts.

### Goldman Sachs | SUMMER ANALYST

May 2017 - Jul. 2017 | Bengaluru, India

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

## Projects

### 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)