Rahul **Garg**

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Education

Rensselaer Polytechnic Institute   *Troy, NY*
MASTER OF SCIENCE IN INFORMATION TECHNOLOGY   *2012-08-01 – 2013-12-01*
GPA: 3.9

Indian Institute of Technology (ISM)   *Dhanbad, India*
BACHELOR OF TECHNOLOGY IN ELECTRONICS AND COMMUNICATION ENGINEERING   *2007-05-01 – 2011-06-01*
GPA: 7.14

Experience

Nova Labs Inc.   *Remote*
SOFTWARE ENGINEER   *2022-04-01 – Present*
- Migrating Helium Blockchain ecosystem to Rust Oracles
- Maintaining Helium Blockchain Network
- Working with the Solana ecosystem

Helium Inc.   *San Francisco, CA*
SOFTWARE ENGINEER   *2017-12-12 – 2022-04-01*
- One of the founding developers of Helium Blockchain Network
- Co-authored HoneybadgerBFT consensus protocol
- Co-authored Distributed Key Generation for the Internet
- Co-implemented novel Proof of Coverage mechanism for reward incentive for Helium miners
- Solved complex mathematical problems related to probability, cryptography and distributed systems

Nimble Storage - Hewlett Packard Enterprise   *San Jose, CA*
SENIOR SOFTWARE ENGINEER   *2016-10-24 – 2017-12-06*
- Owner of Test Execution framework written entirely in Elixir with full OTP behavior
- Wrote tool service monitor, mimics Apple System Status service with real time updates in Elixir
- Migrated legacy Perl automation code to new Python bindings

Cisco Systems Inc.   *San Jose, CA*
SOFTWARE ENGINEER III   *2016-07-01 – 2016-10-24*
- Automation Lead for Cisco Unified Computing System Virtual Interface Card team
- Wrote Python based test framework to interact with Cisco Network Interface cards
- Mentored junior engineers

Cisco Systems Inc.   *San Jose, CA*
SOFTWARE ENGINEER II   *2014-02-03 – 2016-07-01*
- Automated SMB traffic generator for Windows platform for Cisco VIC adapter performance testing
- Developed easy to use Python APIs for Cisco VIC adapters multiple platform testing
- Wrote numerous standalone scripts using Powershell for automated testing of Blade/Rack server adapters for Windows platform
- Planned and exectured test plans for feature releases for Cisco's Unified Computing System with focus on Virtual Interface Cards

Cisco Systems Inc.   *San Jose, CA*
SOFTWARE ENGINEERING INTERN   *2013-05-01 – 2013-08-01*
- Scripted for SCVMM Hyper-V VM-FEX architecture
- Understood Hyper-V, Cisco UCS and virtualization stack

Skills

Languages: Erlang, Rust, Elixir, Python
Web: Phoenix, Flask
Infrastructure: Ansible, Heroku, AWS
Databases: Postgres
Virtualization: Docker, Hypervisor

Projects ───────────────────────

gogo *rust*
TERMINAL BOOKMARK MANAGER *crates.io/crates/gogo*

erlang-hbbft *erlang*
HONEYBADGER BFT CONSENSUS ALGORITHM *github.com/helium/erlang-hbbft*

erlang-dkg *erlang*
DISTRIBUTED KEY GENERATION ALGORITHM *github.com/helium/erlang-dkg*

blockchain-core *erlang*
HELIUM CORE BLOCKCHAIN LIBRARY *github.com/helium/blockchain-core*

miner *erlang*
HELIUM MINER *github.com/helium/miner*

kdtree *erlang*
SIMPLE KDTREE WRITTEN IN ERLANG *hex.pm/packages/kdtree*

vincenty *erlang*
ERLANG LIBRARY TO CALCULATE DISTANCE BETWEEN 2 POINTS WITH VINCENTY'S FORMULAE *hex.pm/packages/vincenty*

erlang-oc *erlang, rust*
ONLINE-CODE RATELESS ERASURE CODES *github.com/vihu/erlang-oc*

erlang-fountain *erlang, rust*
FOUNTAIN CODE RATELESS ERASURE CODES *github.com/vihu/erlang-fountain*

erldpc *erlang, rust*
LDPC BINDINGS *github.com/helium/erldpc*

erlang-tc *erlang, rust*
ERLANG BINDINGS FOR THRESHOLD CRYPTOGRAPHY OVER BLS12-381 KEYS *hex.pm/packages/erlang_tc*

erlang-skiplist *erlang, rust*
ERLANG BINDINGS TO RUST SKIPLIST DATA STRUCTURE *hex.pm/packages/erlang_skiplist*

erl-blake3 *erlang, rust*
ERLANG BINDINGS TO RUST BLAKE3 CRYPTOGRAPHIC HASH FUNCTION *github.com/vihu/erl-blake3*

code-rs *rust*
IMPLEMENTATION OF MULTIPLE DIFFERENT CODING SCHEMES *github.com/vihu/code-rs*

erlang-vc *erlang, rust*
ERLANG PORT OF VECTORCLOCK-RS *github.com/vihu/erlang-vc*