

# Hernán Santiago González Toral

## Curriculum Vitae

Mariano Cueva 6-55  
Cuenca, EC010101, EC  
+593995757960

✉ [hernangt12re3@gmail.com](mailto:hernangt12re3@gmail.com)

🌐 <https://santteegt.github.io>

🌐 <https://ec.linkedin.com/in/santteegt>

🌐 <https://github.com/santteegt>

### SUMMARY OF QUALIFICATIONS

- Skillful in Big Data analysis and cognitive computing using Data Science, Machine learning and Deep learning techniques
- Experienced in the development and orchestration of platform solutions for backend, enterprise middleware and frontend for desktop, web and mobile
- Knowledgeable and certified in the development of decentralized applications on the Ethereum blockchain network
- Obtained industry experience as Senior Consultant through collaborating in the development of Fit-Bank Core System for financial institutions
- Knowledgeable in Semantic Web and Linked Open Data projects
- Proficient in software engineering methodologies for Agile development and continuous delivery
- Skillful as project manager and research assistant

### EDUCATION

#### **Certified Ethereum Developer**

*Consensus Developer Bootcamp*

Oct 2018 –

Jan 2019

An end-to-end Ethereum course designed to provide experienced developers with the knowledge and skills needed to become industry-leading Ethereum developers. This online course covers foundational Ethereum concepts and an introduction to smart contract and dApp development.

Final project: *Decentralized Patreon using IPFS, EIP-1337 Subscriptions and meta-transactions*

#### **MSc Web Science and Big Data Analytics**

*University College London, London, UK*

*Computer Science Department, Faculty of Engineering*

2015 - 2016

Main topics: Information Retrieval, Data Mining, Data Analysis, Complex Networks Analysis, Cloud Computing, Machine Learning, Deep Learning, Natural Language Processing

Thesis title: *“Learning to Recommend using a Deep Reinforcement Agent”*

#### **Bachelor degree in Systems Engineering**

*University of Cuenca, Cuenca, EC*

*Faculty of Engineering*

2006 - 2011

Thesis title: *“Hybrid mobile Application development to manage Bank Officers authorizations”*

Cumulative qualifications: 89.24/100

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## PROJECT EXPERIENCE

**Integrated Solution to Publish and Exploit Bibliographic Resources in the Linked Data Cloud** Jan. 2014-  
Sept. 2015

*CEPRA VII Wining project*

<http://www.cedia.org.ec/proyecto-plataforma-de-integracion-publicacion-y-consulta-integrada-de-recursos-bibliograficos-en-la-web-semantica>

- Developed an integrated core framework to publish and exploit bibliographic resources in the Semantic Web

**Web Graph-based Linked Data Query Builder and Executioner** Nov. 2014-  
*Computer Science Department, University of Cuenca, EC* Jan. 2015

- Designed a Web application prototype to build graph-based SPARQL federated queries

**Semantic Repository of Ecuadorian Researchers** March 2015 –  
*RED CEDIA - Computer Science Department, University of Cuenca, EC* Dec. 2015

- Implement a semantic platform to allow the discovery of common research areas

## RESEARCH EXPERIENCE

**Postgraduate Research Assistant** Jun. 2017 –  
*Computer Science Department, Faculty of Engineering, University of Cuenca, EC* Present

- Collaborated in the research of General Processes for the Semantic Annotation and Enrichment of Electronic Program Guides using scrapping and natural language processing techniques. Built an evaluation method using pre-trained word2vec/fasttext word embeddings for performing semantic similarity
- Assisted in the research of state of the art techniques to develop/deploy and secure systems using microservices architecture
- Working on a research project to perform a comparative analysis of high resolution remote sensing imagery classification methods using spectral-spatial features and machine learning models
- Working on a project that uses Data Science to automate the systematic review process for the generation of quality research articles.
- Working on a chatbot agent to automate Helpdesk ticket processing for bottleneck processes within the IT department at University of Cuenca
- Scientific publications:
  - *Digital Repositories and Linked Data: Lessons Learned and Challenges*, Iberoamerican Knowledge Graphs and Semantic Web Conference, 2019
  - *A General Process for the Semantic Annotation and Enrichment of Electronic Program Guides*, Iberoamerican Knowledge Graphs and Semantic Web Conference, 2019
  - *Land Cover Classification Of High Resolution Images From an Ecuadorian Andean Zone Using Deep Convolutional Neural Networks And Transfer Learning*, 2019

**Graduate Research Assistant** Feb. 2014-  
*Computer Science Department, Faculty of Engineering, University of Cuenca, EC* Sept. 2015

- Assisted in the development of a prototype to deliver the publication of the Dspace digital repositories of the Ecuadorian Universities in the Linked Data Cloud

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- Developed and managed the LODGPlatform project to enable an easier way to integrate, publish and exploit any kind of data sources on the Linked Data Cloud
- Collaborated with a consultancy service, which aims to provide a base platform to manage BPM processes for the City Hall
- Designed and implemented a Web graph-based application to ease a Linked Data query builder and executioner for data federation and discovery
- Implemented a semantic repository of Ecuadorian academics, which will allow the discovery of common research areas and publications
- Cooperated with backend and frontend application development
- Outlined and planned the development lifecycle of the carried out projects
- Cooperated as software developer on different Linked Open Data projects

## INDUSTRY EXPERIENCE

### Senior Consultant

Sept. 2010 - Feb. 2014

*Soft Warehouse, fit-bank.com, Cuenca, EC*

- Developed a Web-based Enterprise Platform modules for banks and financial institutions based on the client requirements
- Completed tasks on time using SCRUM as a way for agile development
- Helped resolving reported issues on the system using related tools for source code management and bug tracking
- Introduced new approaches and solutions to extend the current ERP technology stack, including improvements for the Enterprise service bus, financial core middleware, and frontend modules
- Cooperated with continuous learning for software development and system's user training, both for clients as the company staff
- Managed and collaborated with a multi-disciplinary team of software engineers, economists, MBAs and technicians
- Collaborated as Assistant Chief Technology Officer for "Fenicios" ERP project
- Interacted with customers and partners

### Consultancy services

March 2014 – June 2014

*Soft Warehouse, Cuenca, EC*

- Solved development issues on certain modules of the Financial ERP for Banks and Production Companies
- Collaborated with ideas to solve and deliver customer requirements

### Consultancy Services

August 2014 - October 2014

*Cloud Services, Cuenca, EC*

- Designed and developed a multi company and multi tenancy cloud system to manage electronic vouchers and transactions based on the Ecuadorian Government politics for sales markets

### Full Stack Development

Dec. 2016 –

*[SimpleRide](#), Cuenca, EC*

Present

- Developed a hybrid mobile application (android and iOS compatible) and a reactive backend platform for a community carpooling service

### Bitcoin Bounties contributor

July 2018 –

Remote

Present

- Embark: Update Spanish Translation
  - <https://gitcoin.co/issue/embark-framework/embark/760/1083>

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- Metamask: Update Account Options on Home Screen
  - <https://gitcoin.co/issue/MetaMask/metamask-extension/3461/1282>
- Support Generating Embark Demo in VueJS
  - <https://gitcoin.co/issue/embark-framework/embark/937/1316>
- Expand Sync Statistics (In progress)
  - <https://gitcoin.co/issue/aionnetwork/aion/661/1353>
- Mobile Search Bar And Network Ui Bug
  - <https://gitcoin.co/issue/poanetwork/blockscout/952/1595>
- Change All .Styl Files To .Scss And Replicate Same Structure As Status.Im
  - <https://gitcoin.co/issue/status-im/nimbus.status.im/20/1696>
- Sort Leaderboard By # Of Bounties Solved
  - <https://gitcoin.co/issue/gitcoinco/web/2261/1260>
- Ocean Bounty : Ocean Faucet Server For Trilobite Testnet
  - <https://gitcoin.co/issue/oceanprotocol/ocean-bounties/8/1863>
- As An Avatar Builder User, I Want A Shuffle Button, So I Can Just Pick A Random Avatar Without Thinking
  - <https://gitcoin.co/issue/gitcoinco/web/3811/2451>
- Add Blockchain Domain Resolution With Unstoppable Domains Tooling
  - <https://gitcoin.co/issue/zilliqalight/zilliqua-light-wallet/8/2676>
- As A Gitcoin Team Member, I Want Kudos Purchases Tracked, So I Can Book That Revenue In The Database
  - <https://gitcoin.co/issue/gitcoinco/web/4122/2743>
- Feature: Pending Transactions
  - <https://gitcoin.co/issue/matterinc/FranklinPay-iOS/56/2626>
- Integrate 3Box Profiles Into The Giveth Application
  - <https://gitcoin.co/issue/Giveth/giveth-dapp/754/2902>

## SKILLS

**Programming Languages/Markup:** Java SE8/EE6, Scala, Javascript (ECMAScript 5 and ECMAScript 6), Python 2/3, C/C++, Solidity, Vyper, HTML5, CSS3, PL/SQL ANSI, SPARQL,

**Machine Learning / Data Science libraries and frameworks:** Scikit-learn, Tensorflow, PyTorch, Seaborn, numpy, pandas, Apache Hadoop, Apache Spark, OpenAI gym, Stanford CoreNLP, NLTK, genism, spacy, R

**Data-related platforms:** Pentaho Data Integration, JasperReports, Jaspersoft Studio, Tableau, LODRefine, Silk, Protégé, Elastic Search, Kibana, Logstash, OpenNER, Neo4j, Anaconda, Apache Kafka

**Scrapping/Crawling frameworks:** Scrapy, Selenium

**General Frameworks:** Bootstrap, jQuery, PrototypeJS, BackboneJS, UnderscoreJS, MustacheJS, Meteor, AngularJS, Angular 2, Angular 4, VueJS, React, NodeJS, Bower, OpenLayerJS, Hibernate, SpringBoot, D3js, Ionic2/3, NativeScript, Apache Cordova, Flask Microservices, Django

**Application Server Administration:** Apache2, Jboss EAP 6.x, Apache Tomcat 7, NGINX

**CI/Deployment/Orchestration:** Docker, Heroku, Kubernetes, Jenkins

**Database Administration:** MySQL Server, PostgreSQL, Oracle, MongoDB, Cassandra, Redis

**Operating System Administration:** Ubuntu, CentOS, Alpine Linux

**Testing frameworks:** JUnit, Karma, Mocha, Protractor, JBehave, Selenium, Serenity

**Control System Management:** Git, Mercurial, SVN

**Other Platforms:** Liferay CMS, Apache Marmotta

**Blockchain platforms:** Ethereum, RSK, xDAI, Multichain, Hyperledger Fabric

**Blockchain related:** Truffle, Ganache, Embark, uPort, 3box, RumbleUI, ENS, OpenZeppelin, IPFS, Ocean Protocol

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**IDEs:** Netbeans, Eclipse, IntelliJ IDEA, PyCharm, Sublime Text, Atom, Xcode, Android Studio, Jupyter Notebook, Apache Zeppelin, Remix

**Other Programs:** Adobe Photoshop, Adobe Illustrator, Gimp, Inkscape, Matlab, JOSM, Omnigraffle, TeXShop

## AWARDS & FUNDING

- SENESCYT Scholarship to study a Master's programme in Europe December 2014
- TheGraph + CoinList Hackathon winner May 2019
- Best Paper Award at the 1st Iberoamerican Knowledge Graphs and Semantic Web Conference. Part of the II International Scientific Convention of Science, Technology and Society, "UCLV 2019" June 2019
- BSLHack 2019 Hackathon winner July 2019

## REFERENCES

**Dr. Jorge Mauricio Espinoza Mejia, Director'Professor**

Computer Science Department  
Faculty of Engineering  
University of Cuenca  
12 de Abril, Central Campus  
Cuenca, EC 010150  
+593987967121  
mauricio.espinoza@ucuenca.edu.ec  
Relationship: Director

**Dr. Victor Hugo Saquicela Galarza, Researcher-Professor**

Computer Science Department  
Faculty of Engineering  
University of Cuenca  
12 de Abril, Central Campus  
Cuenca, EC 010150  
+593959472529  
victor.saquicela@ucuenca.edu.ec  
Relationship: Director