

# Johnatan Santos de Oliveira

Lead Data Scientist – Cyber Security | [www.johnatan.net](http://www.johnatan.net) | [johnoliv@gmail.com](mailto:johnoliv@gmail.com) | +55 61 99211 0008

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## Education

[Master of Science]

### **Master of Science in Electrical Engineering (2018)**

Research Interest: Neural Networks, Biometrics, Machine Learning and Information Security.

*Dissertation: Cross-Domain Deep Face Matching for Banking Security Systems*

Advisors: Ph.D Flavio Elias de Deus, UnB / Ph.D Anderson R. Rocha, Unicamp

**University of Brasilia - UNB**

[Postgraduate Studies]

### **Post-graduate studies in Digital Forensics (Computer Forensics) (2012)**

*Dissertation: Computer Forensics in Android Mobile Devices: A Case Study for Smartphone.*

Advisor: Ph.D Laerte Peotta de Melo, University of Brasilia

**Catholic University of Brasilia – UCB**

[Graduate]

**Analysis and Systems Development (2010)** Catholic University of Brasilia - UCB

## Career Experience

### **Banco do Brasil S.A. – Lead Data Scientist**

**Date: January 2021 – present**

At Banco do Brasil, I'm responsible for managing a team of data scientists, machine learning engineers, and big data specialists; Lead data mining and collection procedures; Interpret and analyze data problems; Conceive, plan and prioritize data projects; Build analytic systems and predictive models; Experiment with new models and techniques; Align data projects with organizational goals;

### **Banco do Brasil S.A. – Senior Software Engineer – Security Analyst**

**Date: September 2007 – December 2020**

At Banco do Brasil, I'm responsible for the development and management of new IT projects for distributed systems. My latest projects are related to Information Security, PIX (The new instant payment system from Central Bank of Brazil), JSON Web Signature (JWS), Machine Learning and Neural Networks. I actively participated as technical manager and software engineer for projects such as BBCode (security solution based on QR Code), PIX, validation of biometrics in ATMs, innovation projects, microservices architecture and facial biometrics studies.

**Knowledge applied:** *Java, Python, NodeJS, Machine Learning, Neural Networks, Biometrics, Information Security, Microservices architecture, Docker, Typescript and NoSQL Databases.*

### **Explicaê – Remote Senior Software Engineer**

**Date: May 2020 – Current**

- Work with the Software Architect to apply coding standards and architectural practices.
- Create Crypto and Secure rest services using NodeJS.
- Contribute to comprehensive documentation that supports the development and system support lifecycles.
- Develop and execute unit, functional, integration testing of developed software components.
- Implement software components according to the design specifications.
- Debug, and refactor existing applications and software modules as required.
- Working with Twelve-Factor App Methodology, developing and delivering Software as a Service (SaaS) in an agile and ever-changing environment to delivery features in the shortest time possible.

**Stack:** *AWS (API Gateway, Lambda, Elasticsearch, SQS, DynamoDB and RDS), BitBucket, Docker, NodeJS and RESTful API.*

## **University of Brasilia - Security Researcher CDT / UNB**

**Date: January 2014 to August 2015**

Researcher at the Centre for Technological Development (CDT / UNB) in Network Engineering Laboratory, Department of Electrical Engineering. Technical Cooperation Agreement FUB/CDT and MJ / SE - Civil Identity Registry Redesign and New Pilot Project.

***Research fields:** Big Data, Cloud Computing, Cryptography, CryptoDB, NoSQL Databases, Software Development, Service Oriented Architecture (SOA), Biometric Standards, Information Security and Computer Forensics.*

## **Interactive IINDEX Studio – Business Partner and Creative Director**

**Date: March 2005 to December 2009**

Responsible for design and development of interactive media products, mobile, integrated systems and new technologies, and information architecture and interface design, focusing primarily on user experience and usability.

***Knowledge applied:** Project Management, Development Internet Applications and Mobile Applications, PHP, Action Script, Java Script, Ajax, CSS, HTML, HTML 5, jQuery, JSON, SQL, Data Modeling and creation of interfaces.*

**Alfama Web – Designer and Web Developer** (October 2004 to March 2005)

**Magazine WWW.COM.BR - Contributor and Columnist Writer ASP/FLASH** (Oct. 2005 to Dec. 2006)

**Masterradius Transceptores Ltda - Central Processing Administrator** (April 2004 to Nov. 2004)

**Naweb Ltda - Designer and Developer** (October 2002 to February 2003)

**Advance Trainee Ltda - Computer Technician / Instructor and Developer** (Dec. 1999 to Oct. 2002)

## **Publications**

J. S. Oliveira, G. B. Souza, A. R. Rocha, F. E. Deus and A. N. Marana, "**Cross-Domain Deep Face Matching for Real Banking Security Systems**," 2020 Seventh International Conference on eDemocracy & eGovernment (ICEDEG), Buenos Aires, Argentina, 2020, pp. 21-28, doi: 10.1109/ICEDEG48599.2020.9096783.

De Oliveira., J. S., Torres, J. A. S., Deus, F., Rodrigo B. Nogueira & Deus, F. **A Proposal of a secure ABIS's transmission subsystem adherent to the Brazilian e-gov.** In eDemocracy & eGovernment (ICEDEG), 2018 5th International Conference on eDemocracy & eGovernment on. IEEE, 2018. p. 325-330.

Torres,

J. A. S., De Oliveira., J. S., Deus, F & Junior R. D. **Deduplication as a Service: Overcoming the myth of ABIS Proprietary Solutions.** In eDemocracy & eGovernment (ICEDEG), 2018 5th International Conference on eDemocracy & eGovernment on. IEEE, 2018. p. 109-116.

## **Awards, Courses and other Activities**

- Big Data Fundamentals 2.0 - Data Science Academy (January 2021)
- Introduction to Cybersecurity - Cisco (May 2020)
- Network and Systems Security - Escola Superior de Redes (esr.rnp.br) (2019)
- Web Application Penetration Testing - Escola Superior de Redes (esr.rnp.br) (2019)
- Neural Networks and Deep Learning - Coursera (2018) (DWSZCPRDLZT8)
- Winner of the 2018 Hackaton InovatuAÇÃO Banco do Brasil (2018)
- Certification of Knowledge in Management Security (BB/CespeUNB) (2018)
- Certification of Knowledge in Information Technology (BB/CespeUNB) (2018)
- Cisco TRN SECURE V1.0 Securing Networks w/ Cisco Routers and Switches (2012)
- Winner of the 2012 Best Technology Initiatives - BB Code - Banco do Brasil
- Brazilian Computer Society (SBC) and the University of Brasilia (2011)
  - Mini Course: Malware Analysis: Codes Research Exploits Through a Practical Approach
  - Mini Course: Techniques for Analysis of Dynamic Malicious Code
  - Mini Course: Machine Learning for Computer Security: Methods and Applications

- Mini Course: Live Forensics in Windows Environments
- Cryptography and Digital Keys (4 hours) - Center for Tech. and Knowledge Dissemination (2010)
- Training for MainFrame Analysts Developers (COBOL) - CooperSystem (120 hours) (2009)

### **Articles in Magazines**

Oliveira, J. Minha Primeira Aplicacao J2ME. Revista W, N°71, Ano 6, p. 44-49. São Paulo, 2006.

Oliveira, J. Java Móvel. Revista W, N°70, Ano 6, p. 52-54. São Paulo, 2006.

Oliveira, J. Destaques de Notícias em Flash. Revista W, N°69, Ano 6, p. 44-49. São Paulo, 2006.

Oliveira, J. Componentes Flash. Revista W, N°68, Ano 6, p. 44-49. São Paulo, 2006.

Oliveira, J. MP3 Player Online. Revista W, N°67, Ano 6, p. 44-51. São Paulo, 2006.

Oliveira, J. Personalizando Imagens com o ASP. Revista W, N°66, Ano 6, p. 52-56. São Paulo, 2005.

### **Languages**

Portuguese - Native

English - Advanced

Spanish - Basic