

## Andres Ixim Sebastian Oliva Casado

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Guatemala City, Guatemala

Statement	Software generalist specialized in applied data, inspired in building solutions that deliver social impact. Specific interests in graphics and information visualization, large scale data analysis and user experience focused development.
Languages	<b>Primary</b> Python, Java, JavaScript <b>Others</b> R, C/C++, SQL, PHP, Ruby, C#, T <sub>E</sub> X
Universitary Education	<i>Undergraduate Student</i> , Applied Physics (DNF) <i>Undergraduate Student</i> , Sciences and Systems Engineering Universidad de San Carlos de Guatemala, Final Project: Nutriapp - platform for nutritional follow-up for campaigns against malnutrition. Finished curricula for Sciences and Systems Engineering, 2017
Projects and Experience	<i>Data Analysis Consultant</i> Johns Hopkins University / Breakthrough ACTION <b>June 2023 - February 2024</b> <ul style="list-style-type: none"><li>• Data Cleanup, Data Engineering, Analytics. Unification of different data sources.</li><li>• Analytical view of non-relational data regarding pregnant and early childhood health programs, initial visits and follow up behaviors. Multivariate and correlation analysis.</li><li>• Creating replicable tools to generate data products. Demographic and socioeconomic grouping. Measuring impact and effectiveness of visits.</li><li>• Python, Pandas, GeoPandas, Matplotlib, Spreadsheets, STATA, Kobo Toolkit / ODK</li></ul> <i>Freelance Data Analyst</i> <b>February - March 2023</b> <ul style="list-style-type: none"><li>• Data Cleanup, Data Engineering, Analysis about censorship and violence against journalists in Nicaragua.</li><li>• Performed Visualization of categorical and multivariate data points, generated static publication quality dataviz and interactive online maps.</li><li>• Programming, Geospacial Data, Data Analyst, Visualization</li><li>• Python, Geopandas, Matplotlib, Spreadsheets</li></ul> <i>Director of Software Department</i> Kingo Energy <b>Sept. 2021 - July 2022</b> Head of Software for Solar Energy rural electrification as a Service. Team Leading, System Support, App Development, Bug Fixes, Design and Implementation of new ETL and reporting processes. <ul style="list-style-type: none"><li>• Implementation of Software Solutions, management of human resources, design and elicitation of requirements for new architectural features.</li><li>• Support of the Software solutions powering thousands of customers daily.</li><li>• Server and Database maintenance. Server deployment scripts. Database Management. Draft of software security policies.</li><li>• Launch of new Telemetry SCADA product using RFID data as part of a Pilot.</li></ul>

- JavaScript, NodeJS, Angular, Apache Cordova, CouchDB, Android, PostgreSQL, Linux, Pandas, TypeScript, C.

#### *Trainer*

**Courses through 2019 - 2021**

Open Training – Guatemala

Courses on Python Programming, Web Development and Data Analysis.

- Introduction to Python. Python Web Development and Databases. Data Analytics and Visualization with Python.
- Small Class sizes with personal attention.
- Course contents available online.
- Python, Django, Javascript Frameworks, MySQL, SQLite, Pandas, DevOps Practices, Design and Modeling

*Tech Analyst* Derechos Digitales (organization civil)

**Oct. 2020 - April 2021**

Tech for non-governmental organization based in Santiago, Chile.

Creation of custom software. Technical Support. Training and follow up with fellow organizations. Webmaster tasks. Technical Writing. Internal Security Policy.

- Technical Support: Implementation of security protocols and response plans. Assistance to members with varying technical skill levels.
- Devops: Ansible deployment scripts. Backup and deployment procedures.
- Web development: Wordpress site development, securing of publicly accessible web servers. Load Balancing. Design and Layout implementation.
- Custom Software development for statistical analysis of online political discourse. Exploratory data dashboards with Pandas and interactive JavaScript
- Linux, Windows, Mac OS, Wordpress, MySQL, SQLite, Python, Generalist IT Support, Servers and administration.

*Tech Lead* Afinidata

**2019 - April 2020**

Lead Developer for a parental early stimulation chatbot.

Creation of APIs, fixes and building features, continuous integration, QA and deployment processes. ETL and Data Analysis.

- Testing frameworks, reducing code quality incidents, code coverage from 0 to 80%. Setup of continuous integration and testing.
- Devops: Re-deployment of the platform across AWS cloud. Ansible deployment scripts. Database recovery.
- Data engineering: homogenization of inputs, creation of inner feedback and introduced collection of several user events.
- Data analysis: aide in creation of ML recommendation engine, creation of dashboards, user cohort analysis and status indicators. Metrics, success rates and gamification analysis.
- Python, Django, MySQL, Linux, AWS EC2, AWS RDS, Travis CI, SQLite, Chatfuel

*Provider* Consorcio Observatorio Electoral Guatemala / NDI

**January - August 2019**

Data collection system for issues related to the 2020 election, candidates and events.

Metrics on political ads, unfair or unlawful mass media use, threats or violence, unregistered rallies, etc.

- Large scale storage of complex sample instruments.
- Training and support to over 300 volunteer observers.
- Backup, recovery protocols, service maintenance and security support.
- Data cleanup and quality validation.
- ODK - Ona, PostgreSQL, Jupyter, Pandas, PSPP, Linux, Docker Compose

*Tech Lead Nómada – Guatemala*

**2018**

Tech and strategy for an independent progressive online journal.

- Development of a tech strategy fit for independent media.
- Frontend responsive web development. Progressive mobile web apps.
- Performance and accessibility optimization for web.
- Design and implementation of a digital security policy for high-value and high-risk targets. Securing and hardening of exposed web services.
- Web, Wordpress, Javascript, MySQL, Python, D3.js

*Technical and Publisher Support Open Contracting*

**January - September 2018**

Iniciativa Latinoamericana por los Datos Abiertos / OCP

Technical support for publishers of Open Contracting Data Standard documents on public procurement.

- Supporting publisher's needs related to the standard.
- Validation and analysis of published data in the OCDS.
- Design and implementation of tools for extraction, storage, processing and analysis of large scale OCDS data.
- Reporting on validation status for publishers and support on suggesting ways to improve data publication quality.
- JSON, JSON Schema, Python, PostgreSQL, Google Big Query

*Fellow School of Data*

**2017**

School of Data / Open Knowledge Foundation

Aide in data awareness, education and data driven decisions for activists, journalists and social agents.

- Collaboration with multiple stakeholders on building software platforms based on data to deliver social impact.
- Support for projects related to the Open Contracting standard.
- Assisting creating curricula on basic data education for state institutions.
- Jupyter Notebooks, Python, Neo4J, SQLite, R, Spreadsheets, Design Thinking, User Oriented Design, Hy

*Senior Software Engineer*

**January - September 2016**

Startrack S.A.

Software for commercial GPS tracking

- High concurrency processing, network sockets, database integration, migration to microservices.
- Testing, packaging, deployments and build processes, and documenting.
- Large scale database deployments management (15 DBs, 20-100 GB).
- Java, PostgreSQL, Python, Kotlin, Shell

*Student Developer, Google Summer of Code*

**2014, 2015**

FOSS ASIA / FashionTec – Google Inc.

Software for Knitting Machines - Knitapps, Knitlib, AYAB GUI

- Implementation of protocols and a library for controlling knitting machines.
- API design for several clients (Web, Python library) and devices.
- Asynchronous Serial communication, packaging, testing and documenting.
- User Interface / User Experience.
- Python, JavaScript, WebSockets, Arduino, PyQt

*Teaching Assistant, Ad Honorem*

**2014, First Semester 2015**

Universidad de San Carlos de Guatemala – Engineering Faculty.

- *Operating Systems 2 (2014, 2015):* Introduction to Linux kernel, kernel module development, system calls, virtualization, remote process execution. C, Git

- *Algorithms and Data Structures (2015)*: Algorithmic complexity, Sets, Lists, Dictionaries, Trees (binary, auto balancing, b-trees). *Java, C*

*Freelance Software Developer / Project Manager* **February - May 2014**

- Multinational ad campaign tie-in card game (80 000+ users)
- Team lead, Programmer, SysAdmin
- Java, Play Framework, Scala, OAuth Authentication, MySQL

*Software Engineer* **January 2013 - December 2013**

4 Acertijos – Guatemala City.

- *Systems Architect, Data Analysis*  
Software for enterprise vending workflow analytics and optimization.
- *Team and Project Management*  
Managed the development of a multiplatform mobile real estate sales app.
- Roles as salesperson, exhibit spotter, photographer, Glass explorer, etc.
- Responsive Web Development, HTML 5, Android, Python, .NET MVC 4.

*Software Engineering Intern* **June - September 2012**

Google Inc.

App Engine – San Francisco.

- Python, App Engine Datastore, SQLite.
- Distributed Systems, Non-relational storage.
- Experience in automated Build Tools, testing, code craftsmanship.

Projects and  
Experience  
(cont.)

*Student Developer, Google Summer of Code* **2011**  
openSUSE project – Google Inc.

Taxi - an online ICC color profile calibrations sharing webservice.

- Python, MongoDB, Werkzeug - WSGI, JavaScript
- Collaboration with the OpenICC group on colour management techniques.
- Emphasis on non-blocking, parallel dispatch of binary profiles.
- Presented in Nuremberg, Germany, for the openSUSE Conference 2011

*Developer* **2010+**

Shoebot: Free Software (Python/Cairo based) drawing bot

- Python, PyGTK, PyCairo, Pango, PIL
- Implemented typographic support, bugfixes, style, docs, etc.

*Webmaster* **2009-2011**

InGame Magazine - Promedia Editorial: Pioneering videogame magazine in Latam.

- Website, Forum management
- jQuery, PHP, MySQL, Wordpress.
- Wrote and published articles on printed media, video.

Contests and  
Awards

*Chispa* **March 2015**

Buenos Aires, Argentina

First Prize: Desarrollando America Latina 2014

On-site incubation for two weeks on Social Entrepreneurship.

Design Thinking, Solution-based design. Tech as a change agent for society.

*Space Apps Challenge* **2014**

Guatemala City, Guatemala

Project: Urban Data

Award: Global Award Finalist team, First Place Local Award

Courses and training	<p><i>Low Cost Solutions for Wireless Connectivity</i>  International Center for Theoretical Physics (ICTP), TWAS  Guatemala, Guatemala  Training on implementation of Low Cost Networking in the developing world.  Wireless Networking and internet access, IPv6, antennas and radio physics theory.</p>	<b>November 2011</b>
	<p><i>Mathematical School of Latin America and the Caribbean (EMALCA)</i>  Unión Matemática de América Latina y el Caribe Latin America (UMALCA), Centre International de Mathématiques Pures et Appliquées (CIMPA), International Mathematical Union (IMU)  San Salvador, El Salvador  Courses on Introduction of Dynamical and Chaotic Systems, Markov Chains, and Numerical Methods for the evaluation of PDE.</p>	<b>May-June 2011</b>