

Andres Ixim Sebastian Oliva Casado

+1 415 857 2992 / +502 4173 5444
code@sebastianoliva.com
<http://sebastianoliva.com>
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	Primary Python, SQL, JavaScript Others R, C/C++, Java, PHP, Ruby, C#, T _E X
Universitary Education	<i>Undergraduate Student</i> , Sciences and Systems Engineering Universidad de San Carlos de Guatemala, Finished curricula for Sciences and Systems Engineering, 2017 <i>Undergraduate Student</i> , Applied Physics (DNF)
Projects and Experience	<i>Senior Advisor Of Information Systems And Data Analysis of MEL</i> Johns Hopkins University BSPH / Breakthrough ACTION June 2023 - March 2025 Supported research data collection for public health programs in Guatemala. <ul style="list-style-type: none">• Data Cleanup, Data Engineering, Analytics and Insights. Unified ETL processes for centralizing different data sources. Implementation of Data Warehouse and analytic views for collected data. Compilation of 5 years of historical programs' data of over 10k beneficiaries.• Analysis and processing of non-relational data regarding pregnant and early childhood health programs, behavioural change, initial visits, and follow up behaviors. Multivariate and correlation data analysis. Data visualization and divulgation for academic and community participants.• Creating reproducible tools to generate data products and reports. Demographic and socioeconomic determinant analysis. Measuring impact and effectiveness of visits.• Python, Pandas, GeoPandas, MySQL, Matplotlib, Spreadsheets, STATA, Kobo Toolkit / ODK, MS Power BI <i>Freelance Data Analyst</i> February - March 2023 <ul style="list-style-type: none">• Data Cleanup, Data Engineering, Analysis about censorship and violence against journalists in Nicaragua.• Performed Visualization of categorical and multivariate data points, generated static publication quality dataviz and interactive online maps.• Programming, Geospacial Data, Data Analyst, Visualization• Python, Geopandas, Matplotlib, Spreadsheets <i>Director of Software Department</i> Kingo Energy Sept. 2021 - July 2022 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">• Implementation of Software Solutions, management of human resources, design and elicitation of requirements for new architectural features.• Support of the Software solutions powering thousands of customers daily.• Server and Database maintenance. Server deployment scripts. Database Management. Draft of software security policies.

- Launch of new Telemetry SCADA product using RFID data as part of a pilot program.
- 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 (organizacion civil)

Oct. 2020 - April 2021

Tech for Latin American non-governmental organization based in Santiago de 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 and auditing of publicly accessible web servers. Load Balancing. Web Design and Layout implementation.
- Custom Software development for statistical analysis/NLP 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 childhood 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 increase 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 deployment, PostgreSQL, Jupyter, Pandas, PSPP, Linux, Docker Compose

Tech Lead Nómada – Guatemala

2018

Tech and strategy for an independent 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 Latam 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 in Latin America.

- High concurrency processing, network sockets, database integration, microservices implementation. Monitoring and reliability metrics and alerts.
- Testing, packaging, deployments and build processes, and documenting.
- Large scale database deployments management (15 DBs, 20-100 GB).
- Java, PostgreSQL, Python, Kotlin, Linux Shell, Grafana, Carbon

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

	<p><i>Teaching Assistant, Ad Honorem</i> 2014, First Semester 2015 Universidad de San Carlos de Guatemala – Engineering Faculty.</p> <ul style="list-style-type: none"> • <i>Operating Systems 2 (2014, 2015)</i>: Introduction to Linux kernel, kernel module development, system calls, virtualization, remote process execution. <i>C, Git</i> • <i>Algorithms and Data Structures (2015)</i>: Algorithmic complexity, Sets, Lists, Dictionaries, Trees (binary, auto balancing, b-trees). <i>Java, C</i>
	<p><i>Freelance Software Developer / Project Manager</i> February - May 2014</p> <ul style="list-style-type: none"> • Multinational ad campaign tie-in card game (80 000+ users) • Team lead, Programmer, SysAdmin • Java, Play Framework, Scala, OAuth Authentication, MySQL
	<p><i>Software Engineer</i> January 2013 - December 2013 4 Acertijos – Guatemala City.</p> <ul style="list-style-type: none"> • <i>Systems Architect, Data Analysis</i> Software for enterprise vending workflow analytics and optimization. • <i>Team and Project Management</i> 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.
	<p><i>Software Engineering Intern</i> June - September 2012 Google Inc. App Engine – San Francisco.</p> <ul style="list-style-type: none"> • Python, App Engine Datastore, SQLite. • Distributed Systems, Non-relational storage. • Experience in automated Build Tools, testing, code craftsmanship, cloud scale deployments.
Projects and Experience (cont.)	<p><i>Student Developer, Google Summer of Code</i> 2011 openSUSE project – Google Inc.</p> <p>Taxi - an online ICC color profile calibrations sharing webservice.</p> <ul style="list-style-type: none"> • Python, MongoDB, Werkzeug - WSGI, JavaScript • Collaboration with the OpenICC group on colour management techniques. • Basic metadata parsing of profile data. • Emphasis on non-blocking, parallel dispatch of binary profiles. • Presented in Nuremberg, Germany, for the openSUSE Conference 2011
	<p><i>Developer</i> 2010+ Shoebot: Free Software (Python/Cairo based) drawing bot</p> <ul style="list-style-type: none"> • Python, PyGTK, PyCairo, Pango, PIL • Implemented typographic support, bugfixes, style, docs, etc.
	<p><i>Webmaster</i> 2009-2011 InGame Magazine - Promedia Editorial: Pioneering videogame magazine in Latam.</p> <ul style="list-style-type: none"> • Website, Forum management • jQuery, PHP, MySQL, Wordpress. • Wrote and published articles on printed media, videos.

Contests and Awards	<i>Chispa</i> 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.	March 2015
	<i>NASA Space Apps Challenge</i> Guatemala City, Guatemala Project: Urban Data Design and implementation of open hardware micro sensors mesh for urban living. Awarded: Global Award Finalist team, First Place Local Award	2014
Courses and training	<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.	November 2011
	<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.	May-June 2011