

José Francisco Molano Pulido

Professional Experience

Analytics Chief

Alianza CAOBA

- (July 2018 -)

Machine Learning for Decision Making Teacher

Universidad de La Sabana

- (January 2019 -)

Machine Learning research assistant

Technische Universität Kaiserslautern

- (January 2018 - June 2018): Research on Foundational Deep Learning.

Data Scientist

Banlinea

- (October 2017 - December 2017): Developing a Business Intelligence and Big Data-oriented application. Developing a research on Machine Learning algorithms suitable for financial analysis.

Big Data Diploma Course - Data Science module teacher

Fundación de Egresados de la Universidad Distrital (FEUD)

- (September 2017 - December 2017): Developing teaching material and teaching course sessions. Topics related with exploratory analysis, statistical analysis, Machine Learning and Visual Analytics.

Researcher Assistant on Big Data and Analytics

Alianza CAOBA

- (July 2016 - December 2017): Developing research activities, state of art review and software development oriented in Big Data and Data Analytics. Projects oriented on urban transportation and taxes analysis.

Postgraduate Course Assistant

Universidad de los Andes

- **Computing and Systems Engineering Department - Image and Vision (July 2017 - December 2017):** Homework grading and student counseling. Topics related with image and video processing.
- **Computing and Systems Engineering Department - Big Data (January 2017 - May 2017):** Homework grading and student counseling. Topics related with scalable infrastructure, Hadoop, Spark, NoSQL and MongoDB.

Embedded Systems Software Developer

Proyectos Especiales Ingeniería

- (January 2015 - February 2015): Software development applied on a control system which manages voltage regulation devices.

Auxiliary on Research Projects

Universidad de los Andes

- **School of Engineering (April 2014 - December 2014):** Wiki-like web site development and deployment. This site aims to support Electronics Engineering courses. Currently, this site is used on Digital Systems Architecture, Digital Systems Design, Digital Electronics Systems, Electronics Workshop, Electronics Instrumentation and Control Systems Analysis courses. This site is available on: <http://www.coffeebrain.org/wiki/> (it may have gone under changes since the date of deployment).

Undergraduate Course Assistant

Universidad de los Andes

- **Computing and Systems Engineering Department - Business Intelligence and Communications Infrastructure (January 2016 - May 2016):** Homework grading and student counseling. Topics related with dimensional modeling and data mining. Topics related with application, transport, network, link and physical layers. Communication protocols.
- **Electric and Electronics Engineering Department - Electronics Instrumentation and Digital Systems Architecture (July 2013 - July 2015):** Homework grading, student counseling and tutorial design. Topics related with micro-controller programming, high level hardware design, operating systems, and HDL.

Education

Universidad de los Andes.

Bogotá, Colombia

- **Master in Systems and Computing Engineering** **July 2016 - July 2018**
- **Electronics Engineering** **January 2011 - December 2015**
- **Systems and Computing Engineering** **July 2012 - June 2016**

Technical Experience

- **Data Science:** [Python - Numpy - Pandas - Jupyter] Data quality, data mining and visualization.
- **Machine Learning:** [Tensor Flow - Keras - Sacred] Solutions based on Machine Learning and artificial intelligence.
- **Big Data:** [Hadoop - Spark] Big Data solutions deployment.
- **Data Streams analysis:** [MOA - WEKA] Solutions based on classification over data flows.
- **Storage:** [MySQL - MongoDB - Cassandra] SQL and NoSQL databases.
- **Image Processing:** [OpenCV] Solutions based on image and video processing. Urban mobility applications.
- **Technological Infrastructure:** [Linux (Ubuntu - CentOS) - Nginx] Technological infrastructure management for multiple purposes (emphasis on data-based applications).
- **Web Services Development:** [Python - Flask - Tornado] Web server development oriented on database queries.
- **Embedded Systems Development:** [RaspberryPi - Arduino - PIC - ATMEL] Embedded Systems development for multiple purposes (emphasis on data acquisition).

Languages

- Spanish (Native), English (B2), French (A1)

Publications

- Molano-Pulido, J. and Jiménez-Guarín, C. (2018). SEABIRD: Adaptable Daily Living Activity Identification from Sensor Data Streams. *Procedia Computer Science*, 130, pp.939-946
- Molano-Pulido J., Jiménez-Guarín C. (2017) SEABIRD: Sensor Activity Identification from Streams of Data. In: Solano A., Ordoñez H. (eds) *Advances in Computing. CCC 2017. Communications in Computer and Information Science*, vol 735. Springer, Cham
- Molano-Pulido J., Figueroa P. (2017) Low-cost and Low-precision 2D Tracking System for Virtual Reality and Augmented Reality Applications. In: Camacho D., Gómez H., González P. (eds) *Proceedings of the 4th Congreso de la Sociedad Española para las Ciencias del Videojuego*, vol 1957. *CEUR Workshop Proceedings*

Honors and Awards

- **Best score in Saber Pro 2015 - Engineering, Ministry of Education, Colombia (November 2016):** I awarded the first place on the quality review of higher education State Exam (Saber Pro) 2015.
- **Winner IBM's Hackathon, IBM, DNP Colombia, Universidad de los Andes, Alianza CAOBA (December 2016):** My team won the IBM's Hackathon Cognitiva in which we proposed a Visual Analytics tool with Colombian's government open data.
- **Cum Laude Degree in Systems and Computing Engineering, Universidad de los Andes (October 2016):** I was awarded this distinction for achieving an outstanding performance during my studies at the Universidad de los Andes. The university grants this honor to the graduates who obtain a cumulative GPA among the top 3% of their school - Engineering in this case - in the record of the last five years.
- **Cum Laude Degree in Electronics Engineering, Universidad de los Andes (March 2016):** I was awarded this distinction for achieving an outstanding performance during my studies at the Universidad de los Andes. The university grants this honor to the graduates who obtain a cumulative GPA among the top 3% of their school - Engineering in this case - in the record of the last five years.
- **Most interesting final undergraduate project, Universidad de los Andes (May 2016):** Most interesting final undergraduate project in First Talent Showcase DISC (Systems and Computing Engineering Department).
- **Roberto Rocca Scholarship Candidature, Tenaris – Tubos del Caribe Ltda y Universidad de los Andes (May 2013)**
- **Best Bachelor Student in Class 2010, Colegio Agustiniiano Ciudad Salitre (December 2010)**