# Nicolás Vidal Duque

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## Personal Statement

Industrial Engineer, bilingual, with a minor in computer science and experience in web development. My primary goal is to apply my skills to the world of software development and become a Full Stack professional. I'm excited about the prospect of designing and creating innovative systems and engaging web applications that enhance the user experience. My dedication to problem-solving and attention to detail drives me to tackle software challenges with creativity and precision. Additionally, my effective communication abilities in both English and Spanish enable me to collaborate efficiently in multidisciplinary teams. I am committed to continuous learning and eager to contribute to the exciting field of web development.

## Work Experience

**Ericsson**
**Position: IT Intern - Data Analyst**
06/2023 - 12/2023
Responsabilities

- Train, provide support, and fine-tune a specialized AI agent for extracting purchase order information using AI Builder in Power Automate.
- Developed and maintained Power Automate flows for efficient data extraction, processing, and modeling.
- Employed Python for web scraping, data cleaning, mining, and processing.
- Designed and managed SQL databases for optimized data storage and retrieval.
- Created RESTful APIs using Flask and deployed them via Docker and Kubernetes.
- Proficiently cleaned and processed data using SQL.
- Designed VBA macros and interfaces to streamline data collection and processing.
- Leveraged Power BI for data processing, KPI calculation, and dashboard design to support managerial decision-making.

**Javeriana University**
**Position: Project leader in applied metaheuristics for *Timetabling***
01/2022 – 06/2022
Responsibilities

- Design a mixed integer linear programming model and metaheuristic for the scheduling of university courses.
- Evaluate and adapt algorithms for the development of applied course timetabling metaheuristics.
- Collect and manage data in SQL databases.
- Follow up and review current work methods for the scheduling and logistics of semester classes.
- Investigate and analyze historical information as a design basis.

Achievements

- Implemented a semestral scheduling system that finds optimum-neighbor solutions.
- Applied iterative local search and graph coloring algorithms for class scheduling.
- Achieved a 99.3% improvement corresponding to the semester planning time: the previous method took 4800 minutes (about 3 and a half days); with the new semi-annual planning system it went to 30 minutes.

**Javeriana University**
**Position: Academic Monitor for Engineering Research**
02/2021 – 12/2021
Responsibilities
- Support students in the subject of engineering research.
- Evaluate and design semester academic plans for the development of the subject.
- Improve the academic material of the subject.
- Monitor class performance and identify students who require additional information.

## Formal Education

Bachelor's degree: Industrial Engineering, Pontificia Universidad Javeriana 2019 – 2024
Bilingual Jefferson School 2006 – 2018

## Professional updating

- Applied Statistics and Data Science International Workshop, Universidad Tecnológica de Bolivar 2022
- Java Back End Development, Oracle & Alura Latam, 2023
- Oracle Cloud Infrastructure, Oracle & Alura Latam, 2023
- Java Spring Boot API Design, Oracle & Alura Latam, 2023
- Java Database Integration, Oracle & Alura Latam, 2023
- Business Agility for Software Development, Oracle & Alura Latam, 2023
- SCRUM foundation professional certificate SFPC, CertiProf 2022

## Acknowledgments

**International scholarship for the "Applied Statistics and Data Science International Workshop"** - Bolívar Technological University, 2022
**Academic Excellence Scholarship, for the Industrial Engineering program -** Javeriana University, 2020
**Wushu (Kung Fu) National Silver Medal Athlete -** Colombian Wushu Federation, 2022

## Professional skills

- Front end development (React, JavaScript, HTML, CSS, Tailwind, Bootsrap)
- Backend development (Node.js, SpringBoot, Flask, Django)
- Database management (MySQL, PostrgeSQL, MongoDB, Oracle Cloud)
- Data analysis (TensorFlow, Pandas, Matplotlib, NumPy, R, SQL and NoSQL databases, Python, PowerBi, analytical statistics and probability)
- Data mining
- Optimization and mathematical modeling (AMPL, Solver, VBA and macros in Excel)

## Languages
- Spanish - Native
- English - C1