Martín Alexis Illanes Vindzanova

Civil Engineering in Industries, Diploma in Information Technology · Master in Public Policy (PUC Chile)

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EDUCATION

Pontifical Catholic University of Chile

Civil Engineering in Industries: Diploma in Information Technology Engineering *2019 – 2025*

- Degree awarded with distinction (2026); ranked 5th of 61 in the 2026 graduating class (top 8%).
- Diploma in Information Technology Engineering: IT Project Management, Software Engineering, Databases, Computer Architecture, and Information Systems.
- Latin American Global Leadership program "Transforma e Impacta", UC – Universidad de los Andes (Bogotá) – Tec de Monterrey (2024).

Master's in Public Policy *2024 – 2025*

- Attendance at the Raisina Dialogue as a Delegate (February 2024), representing the School of Government in New Delhi, India.

Bachelor's in Engineering Sciences *2019 – 2023*

- Major in Engineering Design and Innovation, Minor in Industrial Engineering.
- GPA: 5.8/7.0 (Equivalent to approximately 82.9%). Ranked in the top 19% of the class.

Academic Certificate in Public Policy *2022*

Ādažu vidusskola *Ādaži, Latvia*
Secondary education exchange, Ādaži, Latvia *November 2017 – February 2018*

- Academic exchange in Latvia; strengthens the multilingual profile (native Latvian) and Chilean-Latvian dual nationality.

Hamilton Boys' High School *Hamilton, New Zealand*
Secondary education exchange, Hamilton, New Zealand *July 2016 – September 2016*

- Secondary-school academic exchange in New Zealand, with emphasis on English, calculus, physics, and engineering.

EXPERIENCE

Compañía Chilena de Inteligencia de Datos (COCHID)

Data Product Development *March 2026 – Present*

- Build and operate civic data-intelligence platforms (legislation, Congress, elections, and public data), published at cochid.cl.

Foresight

Data & AI Solutions Consultant *2026 – Present*

- On the Ballerina project: structured data flows and designed an AI-agent-based solution to generate and evaluate scenarios, within a planning and evaluation consultancy.
- Built demos and consolidated deliverables (reports and presentations) for the client, and managed project planning.

Compañía de Innovación de Santiago SpA (CIS)

Co-founder: Product Development & Infrastructure *March 2026 – Present*

- I design, build and operate technology and data products (web apps and sites) on self-hosted infrastructure, covering the full cycle: architecture, development, deployment and operations. Site: innovacionsantiago.cl.

Espacio Público

Researcher and Data Analyst *December 2024 – Present*

- Lead researcher of the study "Coverage and financial protection for medicines in Chile" (Espacio Público with support from the Chilean Chamber of Pharmaceutical Innovation, 2025-2026): spending, financing, household burden, high-cost drugs and policy options; published at medicamentos.cochid.cl.
- Research for the IDB (Inter-American Development Bank) on the efficiency and quality of public security spending.
- Worked with proprietary and public databases (CASEN, CENSO, OECD), process automation, and AI tools for public-policy analysis.
- Wrote two bulletins for the economic-growth area and compiled 2,300+ proposals at propuestas-economicas.illanes00.cl.

illanes00.cl: Self-hosted production infrastructure & platform

Linux Infrastructure Administrator & Full-Stack Engineer *2020 – Present*

- Since 2020, I have run a personal fleet of 5 Linux servers (VPS) with 50+ production services, 100+ domains (Caddy), and 14 PostgreSQL databases.
- Designed and operate a custom control plane (illanes00-server, 69 tools): deployments, DNS, secrets, SSO (Authentik), and monitoring (Prometheus/Grafana), with validated failure recovery.
- Build and deploy full-stack applications (Next.js, FastAPI, Flask) end to end (code, CI/CD, TLS, and observability) and orchestrate automated AI-agent workflows on that infrastructure.

Senate of the Republic of Chile

External Advisor *May 2025*

- Research and technical support for legislative work: preparation of bills and amendments, drafting of reports and briefs, and gathering of background material.

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Research Assistant - Prof. Loreto Cox (Fondecyt) *August 2024 – December 2025*

- Data analysis in R for the Fondecyt project "Crime Threat and Democratic Values in Latin America": threat-to-Congress surveys (El Salvador, Sri Lanka, Tunisia), electoral data (CSES), stock-market series (Lima Stock Exchange), and prediction markets in Peru.
- Supported the management of the FONDECYT 2025 research-assistant call.

Teaching Assistant *2020 – 2025*

- 16 TA positions in areas like Computer Science, Public Policy, Design, Economics, and Engineering, including courses such as 'Economics for Public Policy' and 'Evaluation of Public Programs'.
- Impact on over 1300 students through material development, homework review, personalized assistance, and substituting for Professors.

Project Evaluator - eVink S.A. *2024*

- Conducted an evaluation of a project by eVink S.A. related to the electric market within the framework of the Project Evaluation course.
- Through computer simulations, obtained various indicators and made recommendations to the company.

University of Chile - Center for Mathematical Modeling

Methodological Assistant - Education Laboratory *2024*

- Designed the research methodology for a FONDEF project of the Education Laboratory, based on Design-Based Research and the Integrative Learning Design Framework.
- Literature review and definition of the study's instruments and stages, supporting the team at the University of Chile's Center for Mathematical Modeling.

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Assistant in automation and data visualization - School of Government UC *2023 – 2024*

- Automation of antibiotic surveillance reports using R for the Millennium Nucleus for Collaborative Research on Antimicrobial Resistance (Microb-R).

Municipalidad de Puente Alto

Process Analyst (UC Engineering project) *2023*

- Assessment and analysis of the procurement procedures of the Municipalidad de Puente Alto as part of the Process Models course.
- Designed process-improvement strategies presented to municipal officials for implementation.

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Researcher and Engineering Solutions Designer - Hospital Dr. Luis Calvo Mackenna *2023*

- Ethnographic research and design of specialized instruments for the sterilization unit of Hospital Dr. Luis Calvo Mackenna, aimed at improving safety and operational efficiency. Final deliverable at illanes00.cl/dilab.

Research Assistant - DILAB UC *2021 – 2022*

- Research on tools for ethical management in research, focusing on the European Responsible Research and Innovations (RRI) framework. Paper available at doi.org/10.1080/23299460.2024.2360228.

Qualitative Researcher - Ministry of Science, Technology, Knowledge, and Innovation *2020*

- Collaborated with the Ministry to explore regional innovation dialogues using anthropological design techniques within the Anthro-Design course.
- Ethnographic research to identify areas for more effective collaboration between government and regional stakeholders.

LEADERSHIP & REPRESENTATION ROLES

CAi: Engineering Student Council · CAPIDI: IDI Student Chapter · FEUC: UC Student Federation.

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Postgraduate Student Representative – FEUC Council *2025 – Present*

Elected through the Seamos list. Represented postgraduate students on the FEUC Council (2025–2026 terms), participating in ordinary sessions and student-body decision-making.

Presidential Candidate – Sinergia CAi List *2021*

The list focused on the cohesion of the UC Engineering community and the pursuit of a sense of belonging and well-being. 1,333 votes were obtained, corresponding to 47.95% of the preferences.

Academic Delegate – CAi *2021 – 2022*

Highlighted the collection and systematization of information on alternative articulation in order to optimize the career time of students in the major.

Head of Constitutional Process Committee – FEUC *2021 – 2022*

Collaborative work with the FEUC Board, Territorial Councils, and Student Centers to generate spaces for information and discussion about the constituent process.

Established collaboration ties with constitutional delegates, academics, and former authorities of the Republic from various political sectors.

External Coordinator – CAPIDI *2020 – 2021*

Promoted the identity of major students, creating a weekly newsletter called 'The IDI Times' and discussions about the impact of former students on global challenges.

Campaign Manager – UC Approves the Reform *2021*

Coordinated various actors of university politics to inform and promote the reform of under- and over-representation of students at the UC level. The reform was approved with 84.46% of the preferences.

Head of Social Responsibility and Contingency Committee – CAi *2020 – 2021*

Addressed issues such as the constitutional, international, presidential, and memory themes, among others. Special emphasis was placed on uniting the community after the social outbreak and the return to classes in the context of the health crisis.

Generational Delegate – CAi *2019 – 2021*

Strengthened communication with the generation given the health crisis and agreed, together with other delegates, to submit a joint application for participatory funds to finance emergency aid.

Generated a study manual for the Fundamental Competence Exam.

Secretary General – Avanzar UC *2020 – 2021*

Kept the movement active during the health crisis and promoted psychological well-being measures for all students, advised by experts in the field.

Head of Public Role Committee – CAi *2020*

Held student discussion forums, an informative constitutional week in view of the constitutional plebiscite, raised awareness about the crisis in the southern macrozone, and organized Ministerial Talks.

SERVICE & VOLUNTEERING

Student Public Policy Laboratory (@lepp_uc)

Founder and General Coordinator *2022 – Present*

Together with students from the Academic Certificate in Public Policy, LEPP is founded as a student initiative that brings together students from various disciplines and careers with the aim of forming ourselves in the field of public policy. Our mission is to actively participate in debates and discussions across a wide range of topics relevant to society, with a public vocation focus on building a better country.

In 2023, we focused our efforts on researching and analyzing issues related to Drugs and Drug Trafficking, seeking to deliver proposals to various municipalities and the National Congress.

You can review the digital editions of the magazine at lepp.cl (lepp.cl/revista2022 and lepp.cl/revista2023).

Engineering for Chile

Volunteer *2019 – 2026*

Coordination and development of Humanitarian Engineering projects for the Maule region, prioritizing the reuse of waste and gray water, applying tools learned in undergraduate studies. The main collaboration is with the Municipalities of Hualañé and Licantén.

Civic Classroom Foundation

Methodological Assistant *2021 – 2023*

Creation of innovative and participatory workshops that reinforce the democratic vocation and active citizenship at the school level. Responsible for adapting and updating teaching programs to the Citizen Training Plan (Law No. 20.911) and the National School Coexistence Policy (2019).

Additionally, volunteer teaching is provided at Arturo Toro Amor School (Independencia), President Alessandri School (Independencia), Juan Luis Undurraga School (Quilicura), CREE School (Cerro Navia).

CPU

Volunteer *2021 – 2023*

Participation as a volunteer repairing and formatting computers for later use in social foundations or other institutions such as the Women's Prison of San Joaquín.

Tutor Corps

Tutor *2021 – 2022*

Trabajos de Invierno (TDI)

Volunteer *2019 – 2022*

Participation in its 2019 and 2022 editions.

Novice Operations

Volunteer and Squad Leader *2019 – 2021*

Volunteer in the 2019 edition and Squad Leader in the 2021 edition.

Operation Childhood

Volunteer and Squad Leader *2020*

Participation in its 2020 version.

Proyecta Ingeniería
Volunteer *2020*
Participation in its 2020 edition.

PROJECTS & INITIATIVES

Multilingual CV engine (illanes00-cv) *2024 – Present*
Custom system that generates this very CV in 4 languages (es/en/fr/lv) from a JSON data model: LuaLaTeX with Lua filters for the PDF, a Next.js/TypeScript web front-end, and automated deployment (systemd + Caddy). The PDF embeds its structured data (JSON) for AI readability. Open source at github.com/illanes00/illanes00-cv.

Arduino Monitored Garden *February 2021 – Present*
Personal project that collects real-time data from the plants on my terrace and, based on that, determines when to water automatically. Press release in: eldesconcierto.cl. Graphs and more information available at illanes00.cl/plantas

Bot @VotosCamaraCL – Visualization of Chamber Votes *December 2021 – Present*
Personal bot that creates visualizations of each vote of the Chilean Chamber of Deputies. It has been used by media like Canal 13 and La Tercera. Available at twitter.com/VotosCamaraCL

Presidential Speech Analysis *March 2023 – Present*
Personal project that analyzes speeches by former President Piñera and current President Boric. Web scraping is done from Prensa Presidencia, and a small data visualization is created. Available at illanes00.cl/discursos

Hospital Sterilization Project *March 2023 – July 2023*
As part of the DILAB course – Engineering Design Laboratory (IDI2004), the challenge of improving the sterilization processes at Dr. Luis Calvo Mackenna Hospital was addressed, enhancing hospital safety and operational efficiency. Final video available at illanes00.cl/dilab

Mini-game: Guess the Politician! *February 2023*
Mini-game (programmed in a couple of hours) that tests your knowledge of Chilean politicians using Wikipedia information. Available at politicos.illanes00.cl

Tomato Plastic *March 2021 – July 2021*
As part of the Research, Innovation and Entrepreneurship course (ING2030), plastic was developed from tomato processing waste, allowing for sustainable packaging for sauces, compotes, etc. Final video available at youtube.com/watch?v=CK-yOuBCa8Y

SENAME Data Visualization *July 2020*
As part of the Visual Thinking course (IDI1015), a data visualization was developed to showcase the reality of children and adolescents living in SENAME homes (now Mejor Niñez service). Available at idi1015.illanes00.cl

Unillave: Universal Fire Hydrant Key *July 2019*
As part of the Engineering Challenges course (ING1004), a universal fire hydrant key was designed to assist Chilean firefighters. The prototype is currently in the possession of the fire command. Final presentation available at youtube.com/watch?v=9VtZ0aQRCjI

TEACHING ASSISTANTSHIPS

Pontifical Catholic University of Chile
Management of Innovation and Technology (ADP202I) *1st sem. 2025*
School of Government • Teaching Assistant • Professor Julio Pertuzé

Integration Workshop (IIC3103) *1st sem. 2024 – 1st sem. 2025*
School of Engineering • Teaching Assistant • Professors Arturo Tagle and Daniel Darritchon

Evaluation of Public Programs (ADP201G) *2nd sem. 2024*
School of Government • Teaching Assistant • Professor Andrés Hojman

Data Structures and Algorithms (IIC2133) *2nd sem. 2022 – 1st sem. 2024*
School of Engineering • Teaching Assistant • Professors Diego Arroyuelo, Sebastián Bugedo, Eduardo Bustos, and Mario Droguett

Principles of Public Policy (GOB2019) *2nd sem. 2024*
School of Government • Teaching Assistant • Professors Loreto Cox and Martín Ordóñez

Organization and Behavior in the Company (ICS2813) *2nd sem. 2023*
School of Engineering • Teaching Assistant • Professor Julio Pertuzé

Public Policy Economics (GOB1003) *1st sem. 2023*
School of Government • Teaching Assistant • Professor Javier Peñafiel

Anthro-Design (IDI2015) *1st sem. 2022 – 2nd sem. 2022*
School of Engineering • Teaching Assistant • Professors Iñaki Goñi and Isabel Hilliger

Introduction to Programming (IIC1103) *2nd sem. 2021*
School of Engineering • Lab Assistant

Engineering Challenges (ING1004) *1st sem. 2021*
School of Engineering • Follow-up Assistant

COURSES AND MISCELLANEOUS

Winter School *July 2023*
Center for Public Studies

Summer School *January 2023*
Center for Public Studies

Leadership Workshop for Public Service *October 2020*
Center for Public Policy, Pontifical Catholic University of Chile

Classical Liberalism Course – Adam Smith Reading Club *2020*
Led by Gonzalo Vidueira

School of Leaders *October 2019*
Leadership Institute Chile

Founder and General Coordinator – I Choose to Approve *2020*
A command of independents from the center and center-right was organized for the 'Approve' option in the entry plebiscite, as an alternative to what was established by the political parties of the sector. The participation of political figures such as Cristóbal Bellolio, Jaime Bellolio, Érika Olivera, and Javiera Parada stood out.

AWARDS AND RECOGNITIONS

Social Ideas Challenge – UCEF stage (selected) *2023*
Hemispheric University Consortium (HUC)

Distinction – Fundamental Competency Exam *2021*
School of Engineering, Pontifical Catholic University of Chile

Honor Roll *2019*
Pontifical Catholic University of Chile

Academic Merit Award *2018*
Council of Rectors of Chilean Universities

Spirit of English Institute *2018*
English Institute School

PUBLICATIONS

Illanes, M. (In preparation). *Discourse Analysis of President Sebastián Piñera Using Mixed Methods and Machine Learning Techniques*. Working Paper.

Espacio Público (2026). *Coverage and financial protection for medicines in Chile*. Espacio Público report, supported by the Chilean Chamber of Pharmaceutical Innovation (CIF). Research and preparation of the report: M. Illanes.

Illanes, M. (2026). *University Substitution in Thin Regional Innovation Systems: The Case of Puerto Varas' Salmon-Biotech Cluster*. Master's Thesis in Public Policy, Pontifical Catholic University of Chile.

Espacio Público (2025). *El gasto público en seguridad ciudadana en Chile: magnitud, composición y bases para una agenda de calidad y eficiencia*. Report for the Inter-American Development Bank (IDB). Data integration and drafting: M. Illanes.

Illanes, M. (2025). *Chile leads in out-of-pocket health spending*. Op-ed, La Segunda (Espacio Público).

Goñi, J., Parga, M.J., Illanes, M., Millán, M.J., & Rodrigues, E. (2024). *Tooling with ethics in technology: a scoping review of responsible research and innovation tools*. Journal of Responsible Innovation, 11(1). doi.org/10.1080/23299460.2024.2360228

Buffer, C., Illanes, M., Pérez-Beltrán, I., & Roro, A. (2024). *Beyond Nationally Determined Contributions*. In Raisina Dialogue 2024 Conference Report. Observer Research Foundation.

Illanes Vindzanova, M. & Stark García, V. (2022). *A Definitive Constitutional Moment*. Crisálida Journal, 1(2), 40-45.

MEMBERSHIPS

Liberal Network 2019

Political Evolution 2019 – 2020

Honorary Member of "Eiropas Klubs" – European Club 2018
Ādažu vidusskola, Ādaži, Latvia

ADDITIONAL INFORMATION

Nationality: Chilean and Latvian

Project & Process Management: IT project management, process modeling and improvement (BPMN, procedure mapping), project evaluation, and agile methodologies.

Data & Analytics: Advanced SQL and web scraping; visualization and dashboards (Power BI); pandas and tidyverse/R; report automation (Quarto); ML and network analysis (scikit-learn); GIS (QGIS); public data sources (CASEN, CENSO, OECD, etc.).

Infrastructure & DevOps: Linux, systemd, Caddy (reverse proxy + TLS), Docker, Git & GitHub Actions (CI/CD), Cloudflare (DNS), Authentik (SSO), Prometheus & Grafana (observability), secrets management, multi-VPS fleet administration.

Programming Languages: Python, TypeScript/JavaScript, R, SQL, Bash, C/C++, PHP, Lua.

Web / Full-stack: Next.js, FastAPI, Flask, Express, REST APIs.

Databases: PostgreSQL, SQLite, Redis, Alembic (migrations), pgvector (vector search).

AI / LLM / Agents: Claude/OpenAI SDKs, agent orchestration and MCP (Model Context Protocol), RAG and vector search (pgvector), NLP and embeddings.

Design & Multimedia: Adobe Illustrator, Photoshop, InDesign, Premiere, and Audition; Autodesk Fusion 360 (CAD).

Office Suite: Microsoft Office.

Certifications: Amateur Radio License (SUBTEL, 2026); Driver's license.

Languages: Spanish and Latvian native, English (CEFR C1, Cambridge University Press & Assessment English), French (CEFR A2, self-assessed)

Driver's License: Class B (light and passenger vehicles)