

# Fernando J. Yanez

## EDUCATION

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### University of Toronto

Toronto, Canada

Ph.D. in Computer Science (Direct Entry) - Anticipated graduation date: 11/2026

Sep. 2021 - Present

Courses: Introduction to ML (A+) - NN Training Dynamics (A+) - Applied Statistics (A) - Multidisciplinary HCI (A)

Comp. Social Science (A) - Business of Software (A) - Empirical Research Methods in SW Eng. (A+) - InfoVis (A-)

### Metropolitan University

Caracas, Venezuela

BSc in Systems Engineering (GPA: 3.86)

Jan. 2016 - Jul. 2018

Diploma in Advanced Mathematics (GPA: 4.00)

Apr. 2016 - Jul. 2017

### Simon Bolivar University

Caracas, Venezuela

Partial studies of BSc in Production Engineering (GPA: 3.66)

Oct. 2013 - Mar. 2016

## INDUSTRY EXPERIENCE

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### Microsoft

Vancouver, Canada

#### Software Engineer

Jan. 2020 - Sep. 2021

- Developer at the Services Platform for Account & Connected Experiences team in the W+D organization contributing to different web services powering Windows' and account.microsoft.com's experiences while connecting with major backend services (e.g., Office, Xbox).

## PATENTS

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Rey, R., **Yanez, F.**, Houfa, M. (2021). *Shared Visual Content Filtering during Virtual Meetings*. [MS#410324-US-NP](#).

**Yanez, F.**, Rey, R., Houfa, M. (2021). *User-specific Computer Interaction Recall*. [MS#409592-US-NP](#).

Rey, R., Houfa, M., **Yanez, F.** (2020). *Method and System of Intelligently Providing Responses for a User in the User's Absence*. [MS#409015-US-NP](#).

## PUBLICATIONS

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### Workshop Papers

**Yanez, F.**, Nobre, C. (2024) *User-Adaptive Visualizations: An Exploration with GPT-4*. Paper to be presented at the 9th Machine Learning Methods in Visualisation for Big Data Workshop at the annual Conference EuroVis 2024.

**Yanez, F.**, Zavaleta-Bernuy, A., Han, Z., Liut, M., Rafferty, A., Williams, J.J. (2022) *Increasing Students' Engagement to Reminder Emails Through Multi-Armed Bandits*. Paper presented at the 6th Educational Data Mining in Computer Science Education Workshop at the annual Conference on Educational Data Mining.

Li, T., Nogas, J., **Yanez, F.**, Modiri, A., Deliu, N., Prystawski, B., Villar, S.S., Durand, A., Rafferty, A., Williams, J.J. (2021) *Algorithms for Adaptive Experiments that Trade-off Statistical Analysis with Reward: Combining Uniform Random Assignment and Reward Maximization*. Paper presented at the Causal Inference Challenges in Sequential Decision Making: Bridging Theory and Practice workshop at the annual Conference on NeurIPS.

**Yanez, F.**, Medina, A., Trabucco, J. (2019). *Building Bridges: Implementing Redundancy Analysis by means of a Neural Network*. Paper and poster presentation at the LatinX in AI Research workshop at the annual Conference on NeurIPS.

## OTHER EDUCATION

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### University of Toronto

Online

#### SGS Graduate Centre for Academic Communication

- Prewriting Strategies for Developing and Organizing Your Ideas

Jan. 2022 - Feb. 2022

### Carnegie Mellon University

Online

#### Simon Initiative LearnLab Summer School

Jul. 2021

- Computational Models of Learning Track. Built a generative model of learning to predict human learning by implementing the Apprentice Learner Architecture.

## TEACHING EXPERIENCE

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### University of Toronto

Toronto, Canada

#### Course Instructor

Sep. 2022 - Apr. 2024

##### *Department of Electrical & Computer Engineering*

- ECE286 Probability and Statistics (*Winter 2024*)

##### *Department of Computer Science*

- CSC108 Introduction to Computer Programming (*Fall 2022, Winter 2023, Fall 2023, Winter 2024*)

#### Teaching Assistant

Sep. 2021 - Dec. 2024

##### *Department of Computer Science*

- CSC111: Foundations of Computer Science II (*Winter 2024*)
- CSC2702 Communications for Computer Scientists (*Winter 2024*)
- CSC108 Introduction to Computer Programming (*Fall 2021, Winter 2022, Summer 2023, Winter 2024*)
- CSC148 Introduction to Computer Science (*Winter 2023*)
- CSC2701 Communications for Computer Scientists: Interview Training Module (*Winter 2023*)

##### *Faculty of Information*

- INF2190H Data Analytics: Introduction, Methods and Practical Approaches (*Fall 2023*)

##### *Department of English*

- ENG286 Literature and Data (*Fall 2023*)

##### *Department of Computer and Mathematical Sciences (University of Toronto Scarborough)*

- MATA32 Calculus for Management I (*Fall 2022*)
- MATA33 Calculus for Management II (*Winter 2023*)

##### *Department of Chemistry*

- CHE223 Statistics I (*Winter 2023*)

### Metropolitan University

Caracas, Venezuela

#### Adjunct Instructor

Sep. 2018 - Dec. 2019

##### *Department of Project Management and Systems*

- BPTSP05 Algorithms and Programming (*Winter 2019, Summer 2019*)

##### *Department of Mathematics*

- BPTMA21 Statistics I (*Winter 2019, Summer 2019*)
- BPTMI11 Differential Equations (*Winter 2019, Summer 2019*)
- FBTMM00 General Mathematics (*Fall 2018, Winter 2019, Summer 2019*)

## RESEARCH EXPERIENCE

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### Human Interactive Visualizations - HIVE Lab - University of Toronto

Toronto, Canada

#### Ph.D. Student

Sep. 2022 - Present

- ML-powered visualizations for personalized visualization literacy, supervised by Prof. Carolina Nobre.
- Exploring the Role of User Representations in Visual Analysis: Predicting Visualization Preferences and Task Performance (Submitted to CHI, September 2024).
- State-of-the-art Report in User-Adaptive Visualizations (Submitted to CGF, January 2024).

### Intelligent Adaptive Interactions Lab - University of Toronto

Toronto, Canada

#### Ph.D. Student

Jul. 2021 - Aug. 2022

- Implemented Multi-Armed Bandits algorithms in educational settings, supervised by Prof. J. Williams.

### QUANTIC - Barcelona Supercomputing Center

Barcelona, Spain

#### Visiting Researcher

Sep. 2019 - Nov. 2019

- Studied Gaussian Processes and their intersections with Quantum Computing, supervised by Prof. J.I. Latorre.

## **Metropolitan University**

**Caracas, Venezuela**

### **Researcher**

Jan. 2019 - Jan. 2020

- Improved Classification Accuracy of Three-Player GANs by adding different training techniques.
- Optimized the Efficiency of Radio-Controlled Aircraft by Selecting the Propeller using Neural Networks.

### **Undergraduate Thesis**

Jan. 2018 - Jun. 2018

- Implemented Redundancy Analysis through a Neural Network, supervised by Prof. J.C. Trabucco.

## **HONORS & AWARDS**

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### **Schwartz Reisman Institute for Technology and Society - University of Toronto**

**Toronto, Canada**

Graduate Fellowship: 7,500 CAD.

Jul. 2024 - Present

### **Massey College - University of Toronto**

**Toronto, Canada**

Junior Fellowship.

Sep. 2023 - Present

### **Ontario Student Assistance Program**

**Toronto, Canada**

Queen Elizabeth II Graduate Scholarship: 15,000 CAD.

Sep. 2022 - Aug. 2023

### **Amii**

**Edmonton, Canada**

AI Week Talent Bursary program: 1,500 CAD to attend AI Week 2022.

May 24-27, 2022

### **Microsoft**

**Vancouver, Canada**

Honorable Mention in Microsoft's Hackathon project.

July 27-29, 2020

### **Latinx in AI**

**Vancouver, Canada**

Travel Grant of 3,210 USD to participate in the Research Workshop at NeurIPS.

Dec. 2019

### **SAE Aero Design East - International Micro Class**

**Lakeland, FL USA**

2nd place SAE International Micro Class Award.

Mar. 2018

1st place Highest Payload Performance - 1st place Oral Presentation - 2nd place Written Design Report.

### **Metropolitan University**

**Caracas, Venezuela**

Graduated Cum Laude in BSc, 2nd in class.

Feb. 2019

Honorable Mention in Undergraduate Thesis.

Jun. 2018

Academic Performance Scholarship.

Sep. 2016 - Jul. 2018

## **LEADERSHIP EXPERIENCE**

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### **Massey College - University of Toronto**

**Toronto, Canada**

Member of the Lionel Massey Fund.

Oct. 2023 - Present

Mentoring and Tutoring Committee Co-chair.

Oct. 2023 - Apr. 2024

### **EuroVis 2024**

**Odense, Denmark**

Volunteer.

May 27-31 2024

### **Department of Computer Science - University of Toronto**

**Toronto, Canada**

Volunteer as a mentor for the Grad Application Assistance Program.

Nov. 2022 - Dec. 2022

Volunteer as MScAC Mentor for Technical interview preparation.

Sep. 2022 - Dec. 2022

### **Find Your Path Organization**

**Toronto, Canada**

Volunteer Math Tutor for High School Students from Black Communities.

Oct. 2021 - Jun. 2022

### **Microsoft**

**Vancouver, Canada**

Volunteer interviewer for the University Graduates program.

Jan. 2021 - Apr. 2021

### **UNIMET SAE Aero Design**

**Caracas, Venezuela**

Member and Secretary-General.

Sep. 2016 - Jul. 2018

### **Thespiis Theater Group**

**Caracas, Venezuela**

Actor.

Sep. 2016 - Jul. 2018

### **AIESEC**

**Caracas, Venezuela**

Volunteer at a foster home for children in risk situations.

Dec. 2016 - Jan. 2017