1. BASIC INFORMATION

1.1. Personal details and contact information

Name:	Agustin Zuniga
Place of birth:	Quito, Ecuador.
Nationality:	Ecuadorian.
Address:	P.O. Box 4 (Yliopistonkatu 3)
	00014 University of Helsinki, Helsinki, Finland.
Mobile:	+358 417544428
E-mail:	agustin.zuniga@helsinki.fi
Homepage:	https://agustin-zuniga.com/
Researcher ID:	https://orcid.org/0000-0002-6481-3559

Postdoctoral Researcher
PhD, MSc, BEng

1.2. Academic degrees

Degree: PhD in Computer Science, University of Helsinki, Finland.   **Period: 2019 – 2023**
Thesis: Pervasive Data Science: From Data Collection to End-User Applications

Degree: MSc in Computer Science, University of Helsinki, Finland   **Period: 2016 – 2018**
Major: Algorithms, Data Analytics and Machine Learning.
Thesis: Analysis of the Impact of Performance on Apps Retention.

Degree: Postgraduate Programme in Manufacturing Control and   **Period: 2007 – 2009**
Automation, University of Buenos Aires – UBA, Argentina.
Final project: SCADA Framework Evaluation based on Service Oriented Architecture (SOA).

Degree: BEng in Informatics and Computing Systems, Pontifical Catholic   **Period: 2003 – 2006**
University of Ecuador – PUCE, Ecuador.
Thesis: Pattern Recognition using Neural Networks - ART (Adaptative Resonance Theory).

1.3. Work experience

Dec 2023 – Date	**Postdoctoral Researcher**
	Pervasive Data Science Group, University of Helsinki.
Jun 2017 – Mar 2019	**Research Assistant**
	Pervasive Data Science Group, University of Helsinki.
Dec 2010 – Aug 2016	**Head of Area, Project Leader**
	Area of Automation and Industrial Control Systems, Centre of
	Hydrocarbons Control and Monitoring – CMCH, Ecuador.

1.4 Short background

Agustin Zuniga is a postdoctoral researcher at the CS Department, University of Helsinki, Finland. He earned his PhD with the highest grade "Pass with Distinction" in 2023. His background includes 1.5 years as a Research Assistant, 1.5 years as a University Lecturer at the International University of Ecuador, and over six years of management experience in Ecuador. Dr. Zuniga specializes in designing low-cost sensing and modeling sustainable solutions using the IoT and AI. His research contributions include publications in top-tier venues such as The Web Conference, IEEE PerCom, ACM IMWUT and IEEE IoT Journal. He has served as a reviewer for prestigious journals such as Springer Nature and ACM IMWUT.

1.5. Positions of responsibility

Student Representative (Jan 2022- Dec 2023), Doctoral Board of the Doctoral Programme in Computer Science (DoCS), University of Helsinki, Finland.

2. RESEARCH AND SCIENTIFIC ACTIVITIES

2.1. Significant publications (3 most significant)

1. **[The Web Conference] A. Zuniga,** H. Flores, E. Lagerspetz, P. Nurmi, S. Tarkoma, P. Hui, J. Manner, (2019). *Tortoise or Hare? Quantifying the Effects of Performance on Mobile App Retention*, In Proceedings of the WWWW Conference. DOI: 10.1145/3308558.3313428
   - **Relevancy**: Analysis, quantification and modelling of the effect of energy consumption and networking latency in mobile app retention.
2. **[IEEE PERCOM]** Flores, H., **Zuniga, A**., Faghihi, F., Li, X., Hemminki, S., Tarkoma, S., Hui, P. and Nurmi, P. (2020). *COSINE: Collaborator Selector for Cooperative Multi-Device Sensing and Computing.* In Proceedings of IEEE International Conference on Pervasive Computing & Communications. DOI: 10.1109/PerCom45495.2020.9127364
   - **Relevancy:** A novel method to select collaborators in multi-device environments based on regularity from Markov trajectory entropy matrix.

3. **[IEEE Perv. Comp.] Zuniga, A.,** Flores, H., and Nurmi, P. (2021). *Ripe or Rotten? Low-Cost Produce Quality Estimation Using Reflective Green Light Sensing.* In IEEE Pervasive Computing, 20(3), 60-67. DOI: 10.1109/MPRV.2021.3074474
   - **Relevancy:** A novel low-cost sensing method for estimating and modelling produce quality using green-light sensing.

Full list of publications is available at https://researchportal.helsinki.fi/fi/persons/agustin-zuniga

2.2. Research assessments and awards
- Doctoral thesis price 2023 of University of Helsinki.
- Nokia Scholarship Award (2021), Nokia Foundation.
- Travel Grant (2019), DoCS, Faculty of Science, University of Helsinki.

2.3. Activities in the academic community
- **Conference and workshop organization and technical committees:** Video Chair at ACM MobiSys 2023, Web Chair at PerCrowd 2020 and PerCrowd 2019
- **Recognised reviewer:** Springer Nature, ACM IMWUT, IEEE UIC, IEEE Open Journal of the Computer Society, Pervasive and Mobile Computing Journal, IEEE IoT Journal.
- **Scientific presentations:** Tartu-Helsinki Workshops on Pervasive Sustainability and Autonomous Sensing Vehicles 2022, UbiComp 2021, The Web Conference 2019.

2.4. Research collaboration
I conduct research in pervasive systems, data science and IoT and have had the privilege of collaborate with prestigious researchers worldwide, such as Professor Pan Hui, HKUST, Hong Kong, on data science. Professor Moustafa Youssef, American University in Cairo, Egypt, on sensing systems. Associate Professor Huber Flores, University of Tartu, Estonia, on mobile computing. Assistant Professor Marko Radeta, University of Madeira, Portugal, on deep learning, and environmental marine sensing.

3. TEACHING AND SUPERVISION

3.1. Pedagogical training
I have continuously developed my teaching skills by taking courses at the Centre for Teaching and Learning (HYPE), University of Helsinki, Finland. My training has focused on learning pedagogy methods and practices for teaching in higher education environments, including assessment, supervision, course design.

3.2. Experience in undergraduate and postgraduate teaching
Lecturer and co-lecturer

2021 - Date	Faculty of Science, Department of Computer Science, University of Helsinki **Courses:** Seminar on the Internet of Things (2021 and 2022 – Together with Prof. Petteri Nurmi), Pervasive Data Science (2022 – Together with Prof. Petteri Nurmi, 2023 – Together with Prof. Petteri Nurmi and Dr. Ngoc Thi Nguyen).
2015 - 2016	Faculty of Mathematics and Technology, International University of Ecuador **Courses**: Formal Languages and Automata Theory (2015 -2016), Business Simulation (2015).

Teacher Assistant

2019 - 2023	Faculty of Science, Department of Computer Science, University of Helsinki **Courses:** Mobile Sensing (2019), Pervasive Data Science (2020, 2021), Seminar on the Internet of Things (2020), Introduction to the Internet of Things (2019-2023).

3.3. Development of online learning platforms
I, along with Professor Petteri Nurmi and Dr. Ngoc Thi Nguyen developed the Introduction of Internet of Things – MOOC (https://iot.mooc.fi/), contributing to democratize higher education in IoT worldwide.

3.4. Experience in supervision
I have supervised 3 bachelor theses from different universities in Ecuador. My role was helping to develop the thesis idea, validating methods and. evaluating the accomplishment of objectives.

4. PERSONAL REFERENCES

For further details of my background qualifications, please contact my personal references:
- **Petteri Nurmi, Professor,** Department of Computer Science, University of Helsinki, Finland. Email: petteri.nurmi@helsinki.fi
- **George Roussos, Professor,** Mobile Computing and the Internet of Things Lab, Birkbeck College, University of London, UK. Email: g.roussos@bbk.ac.uk