

GONZALO UCEDA CASTRO

Senior Software Engineer | Double M.Sc. in ICT Innovation (HCI)

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LINKS

github.com/guceda, medium.com/@gonzaloucedacastro, linkedin.com/in/gonzalo-uceda

PROFILE

Hi! My name is Gonzalo. I am a passionate Software Engineer who thrives at the intersection of design and engineering.

I hold a Double Master's degree in ICT Innovation, with a focus on Computational Interaction. I have mostly worked in JavaScript and TypeScript doing front end and data visualization. I also spent quite some time working in the Machine Learning field, implementing algorithms for time-series real-time anomaly detection. I currently work as a full-time Senior Software Engineer for a SIEM company, and on the side, I'm also a collaborating professor in the HCI department of Computer Engineering at UOC University.

In my free time, I love learning about new advancements in technology and design. I also enjoy practicing nature sports and complaining about poorly planned greenless cities.

I consider myself to be a restless, curious, and proactive individual. I possess a great deal of work capacity, organization, and rigor. I have worked in multicultural environments for an extended period, which has broadened my perspectives and greatly influenced my way of being. I feel most comfortable in such environments and hope to continue working in them in the future.

PROFESSIONAL EXPERIENCE

❖ **Senior Software Engineer - Data Visualization Tribe, Devo** Jun 2023 — Present
Hybrid - Madrid, Spain

As a Senior Software Engineer, my current role encompasses research, engineering, development, and TPO-related tasks. My primary focus is on front end, where I work extensively with TypeScript and React.

In my role, I am responsible for various tasks, including:

- Developing new features, mostly in the front end realm.
- Leading developments at both the technical and product levels.
- Working on innovation in relation to information visualization and data analysis.
- Conducting user research.
- Drafting, planning, and prioritizing initiatives to be developed.
- Managing backlogs.
- Conducting agile ceremonies.
- Creating planning-related metric analysis dashboards.
- Creating technical documentation, both at the code and process levels.
- Developing and maintaining CI/CD pipelines.
- Offering technical support to team members.

❖ **Affiliate Teaching Staff, Universidad Oberta de Catalunya** Sep 2022 — Present
Remote

As an Affiliate Teaching Staff for the Human-Computer Interaction course in the Computer Engineering Bachelor's degree, I facilitate student learning by providing guidance and support for their education journey. Additionally, I am a member of the evaluation panel for Bachelor's Thesis projects in Computer Engineering, specializing in the evaluation of projects related to human-computer interaction.

My work involves, among other responsibilities:

- Providing learning support to students.
- Assisting with problem-solving and doubt clarification.
- Grading of assignments and projects.
- Evaluation and grading of Bachelor's Thesis Projects.

❖ **Software Engineer - Data Visualization Tribe, Devo** Jul 2022 — Jun 2023
Hybrid - Madrid, Spain

As a member of the data visualization team, my contributions encompassed various responsibilities, including:

- Developed and open-sourced multiple libraries to facilitate the implementation of a comprehensive design system in the company's front end.
- Lead the transition to Typescript for the company's React component library, ensuring adherence to best practices and high-quality standards.
- Assisted in the development and maintenance of the legacy component library.
- Contributed to front-end development for the company's data visualization library.
- Performed DevOps tasks such as implementing continuous integration and delivery in both GitHub and GitLab pipelines.
- Conducted code reviews to ensure code quality.

❖ **UX Engineer - MSc Thesis, Devo** Jan 2022 — Jul 2022
Madrid, Spain | Aalto, Finland

Conducted a research and development project in the field of *UX* engineering as part of an industrial thesis for a double master's degree in ICT Innovation in a joint collaboration between *Devo* and *Aalto University*. The project aimed to redesign a text-based code editor for a domain-specific query language embedded in a data monitoring visual interface, with the goal of improving usability and fostering language discovery.

The project involved:

- **Project Planning:** Developed a well-structured plan for the research and development project, taking into account all the necessary requirements, constraints, and timelines.
- **Research on existing product and state-of-the-art alternatives:**
 - Conducted a thorough heuristic evaluation of the existing system, identifying areas for improvement.
 - Conducted extensive research, reviewing relevant literature to assess the suitability of existing techniques.
- **User-Centered Design:** Employed a user-centered approach, integrating user feedback and preferences throughout the project to ensure an optimal user experience.
- **Prototyping:** Utilized Figma to create a functional prototype, allowing for fast iterations and validation of design concepts before implementation.
- **MVP Development:** Developed a custom solution that integrated a within-editor dual search engine to support exploration and exploitation search tasks for improved language usage and a progressive evaluation system to better support exploratory design tasks. The prototype implementation consisted of a front end with Typescript and ReactJS, a word embedding search engine developed in Python with Flask, and an AST parser in NodeJS.
- **Evaluation and Assessment:** Conducted user studies, including design walkthroughs and informal summative evaluations to assess the effectiveness and user acceptance of the redesigned solution.

The thesis received a grade of 5/5 and the redesign proposal is currently part of the company's backlog.

The document can be accessed at the following link: <https://aaltodoc.aalto.fi/handle/123456789/116491>

❖ **Frontend Developer, Hopsworks** Dec 2021 — Jan 2022
Stockholm, Sweden

As a member of a small team in an MLOps startup, I held a multidisciplinary position that encompassed design, coding, and DevOps tasks. I made significant contributions to the platform's design, front-end development, components library maintenance, and automation/continuous integration processes. I was responsible for various tasks, including:

- Contributed to the development of the company's platform by designing UI layouts and components in Figma, implementing custom data visualization charts using D3.js, and maintaining the codebase written in Typescript, React, and Redux.
- Developed and maintained a comprehensive components library written in Typescript with React.
- Managed and maintained GitHub pipelines to streamline the development process, ensuring smooth integration and continuous delivery.
- **Code Reviews:** Conducted code reviews to ensure code quality, adherence to best practices, and consistency across the platform.

❖ **Software Engineer Associate - Machine Learning Team, Devo** Aug 2018 — Jun 2020
Madrid, Spain

As a member of the Machine Learning team at Devo, I took on a leadership role in front-end development and data visualization. My main responsibilities involved research tasks and designing and developing interactive widgets for anomaly detection. Some of the key tasks I performed were:

- Developed interactive widgets for real-time time series anomaly detection.
 - Prototyped and designed the user interface and interactions using Figma.
 - Implemented time series anomaly detection algorithms (RRCF and Triple Exponential among others) in JavaScript.
 - Developed interactive widgets to support real-time training and evaluation using the above-mentioned algorithms.
- Designed and built an interactive user interface to support research tasks within the team. This involved developing a Jupyter-like Python notebook that runs in the browser using Pyodide and implemented the interface using JavaScript with React.

EDUCATION

❖ **Aalto University** Aug 2021 — Jul 2022
Master of Science (Technology) in HCID with a specialization in Computational Interaction Espoo, Finland

Final Grade: 4.58/5 - Graduated with Honors

Thesis: Redesign a query editor to support exploratory design tasks and foster language discovery (Grade 5/5)

EIT Master in ICT Innovation in HCID at Aalto University with a specialization in Computational Interaction.

The program provided advanced knowledge and skills in the design, development, and evaluation of interactive technology and systems. It aimed to equip graduates with the ability to innovate in the field of ICT and drive digital transformation in various industries. The curriculum covered topics such as human-computer interaction, user-centered design, and emerging technologies. This was the exit year of a double degree program labeled by the European Institute of Technology.

The specialization of Computational interaction applied advanced techniques such as abstraction, automation, and analysis to gain a deeper understanding of the structure of human-computer interactions. This understanding is then used to design software that drives new and innovative interfaces. This specialization incorporates elements from various disciplines such as machine learning, signal processing, information theory, optimization, inference, control theory, and formal modeling to achieve this goal.

The master included the following courses: Computational User Interface Design, Machine Learning with Python, User Research, Innovation and Entrepreneurship, Explorative Information Visualization, User Interface Construction.

❖ **University of Rennes** Jul 2021
EIT Summer School in "Reshaping Cities for a Healthy Environment" Rennes, France

Summer schools program focused on providing an in-depth understanding of specific topics related to innovation and technology. This program took place over a period of two weeks and involved a combination of lectures, workshops, and group projects. The specific topic of this summer school was "Reshaping Cities for a Healthy Environment", which focused on exploring innovative solutions for designing and building sustainable and livable cities.

❖ **KTH Royal Institute of Technology** Aug 2020 — Jul 2021
Master of Science in ICT Innovation, major in HCID and minor in Innovation and Entrepreneurship Stockholm, Sweden

Final Grade: 4.58/5 - Graduated with Honors

The EIT Master in ICT Innovation HCID at KTH University is a program that focuses on the intersection of human-computer interaction and design, with a focus on using technology to drive innovation and improve the user experience. The program includes a major in Human-Computer Interaction and a minor in Innovation and Entrepreneurship.

The program covers topics such as usability, user-centered design, and the development of new technologies. This is the entry year of a double degree program labeled by the European Institute of Technology.

❖ **Universitat Oberta de Catalunya** Sep 2020 — Present
Bachelor's Degree in Telecommunication Technology Engineering Online

Pursuing a part-time, distance-learning Bachelor's Degree in Telecommunication Technology Engineering.
Currently finishing the first year.

❖ **Neoland School** Mar 2018 — Jul 2018
Fullstack Bootcamp Madrid, Spain

Practical program focused on the development of web applications using Angular and Express (NodeJS).
Technologies covered include Angular 2, Ionic, NodeJS, Express, Sass, JQuery, Bootstrap, ES6, TypeScript, MySQL, MongoDB, Git, as well as design tools such as Adobe XD, Bootstrap Studio, Photoshop, Illustrator, and InDesign.

❖ **Universidad Complutense de Madrid** Sep 2012 — Feb 2017
Bachelor's Degree in Fine Arts Madrid, Spain

Dissertation: Communication in abstract interactivity (Grade 9.0/10)

Bachelor's degree in Fine Arts with a focus on technology applied to art.

During the dissertation, I analyzed the communicative relationships established between the piece and the spectator in interactive art, and the impact of technology on the transfer of images to two dimensions, which led to the construction of a homemade vertical plotter using Arduino and Processing, and the creation of an interactive artwork that explores the ambiguity and multiplicity of interpretations of abstract technological images.

❖ **Tsukuba University** Apr 2016 — Sep 2016
Intercultural Studies (Exchange Scholarship) Tsukuba, Japan

International exchange program at Tsukuba University through an Erasmus Mundus scholarship, with a focus on Intercultural Studies.

❖ **ESA Saint-Luc Liège** Sep 2015 — Feb 2016
Illustration (Erasmus+ Scholarship) Liège, Belgium

International exchange program at ESA Saint-Luc Liège through an Erasmus scholarship, with a focus on Illustration.

COURSES & WORKSHOPS

❖ **Buiding AI**
University of Helsinki

❖ **Elements of AI**
University of Helsinki

❖ **Leadership Workshop**
GrowthSpace

❖ **ChatGPT Prompt Engineering for Developers**
deeplearning.ai

EXTRA-CURRICULAR ACTIVITIES

❖ **Speaker at Tech Conference** Apr 2023
Commit Conf Madrid, Spain

As a speaker at Commit Conf, I delivered a presentation on the creation of a software design system for Devo, a global cybersecurity start-up. My talk centered around the journey of our team of designers and programmers as we developed an ambitious design system that prioritized unity, consistency, and user-friendliness. I discussed the challenges we encountered and offered practical tips, tools, and valuable lessons learned throughout the process.

Emphasizing the significance of releasing the design system as open-source software, I highlighted the benefits it brings to the professional community and the institution spearheading its evolution.

Agenda: <https://koliseo.com/events/commit-2023/agenda>

❖ **Liaison to the European Union for G7 Ministers Meeting** May 2016
Tsukuba University Tsukuba, Japan

During my time as an exchange student in Japan, I served as a liaison for the European Union representative at the G7 Science and Technology Ministers Meeting held in Tsukuba.

CONFERENCES AND SEMINARS

❖ **Commit Conf** Apr 2023
..... Madrid

Technology event featuring conferences, workshops, and networking opportunities for developers and tech professionals.

❖ **Codemotion** Nov 2019
..... Madrid, Spain

Technology event featuring conferences, workshops, and networking opportunities for developers and tech professionals.

❖ **Predictive Analysis World** Apr 2019
..... Berlin, Germany

Technology event which focuses on the use of predictive analytics and machine learning techniques to drive business performance and decision-making.

SKILLS

Creative thinking	Adaptability
Communication	Time Management
Analytical thinking	Teamwork
Leadership	Resilience

HOBBIES

During my leisure time, I engage in a wide range of hobbies. I find joy in jogging, skiing, in many water sports like surfing and kayaking. I am also passionate about traveling, hiking, and embracing the outdoors in general. I also have a keen interest in sustainability, coupled with a rather unconventional "obsession" for sustainable urbanism and green urban development.

LANGUAGES

Spanish	<i>Native speaker</i>	French	<i>Working knowledge</i>
English	<i>Highly proficient</i>		