Stefania Druga

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Qualifications summary

- Multimodal AI
- Large Language Models applications.
- Program synthesis for computer-supported coding.
- Research on Creative AI applications.
- Extensive experience in building programming platforms for children.
- Teaching classes about creative learning and prototyping with AI.

Awards

- NSF FMitF Grant for End-User Programming project, 2021
- Jacobs Foundation Grant for AI Literacy project, 2020
- Weizenbaum Research Fellow in Criticality of AI-based Systems Lab in Berlin, 2019
- Google Fellow, Google & NYU ITP, 2019.
- LEGO Papert Fellow, MIT MediaLab, 2018
- Finalist of Ideas for Europe competition, EU, 2017
- Women to Watch in Science, Women at the frontier, 2016

Research Experience

- Research Scientist, Google Gemini (January 2024 - Present)
  - Working on multimodal AI applications
  - `https://gemini.google.com`
- Principal Researcher, Center of Applied AI Research U. Chicago (July 2023 - January 2024)
  - Working on LLM applications for social impact
  - `https://www.chicagobooth.edu/research/center-for-applied-artificial-intelligence`
- Research Intern, HAX Microsoft Research (March 2023 - July 2023)
  - Working on novel LLM applications
  - `https://www.microsoft.com/en-us/research/group/hax-team`
- Product Engineer, Fixie.ai (December 2022 - March 2023)
  - Help prototype new LLM platform for distributed specialized LLM agents
  - Designed and ran user-studies to evaluate the platform
  - Organized large-scale community events for prototyping and building LLM Agents
  - `https://fixie.ai`
- AI Research Resident, X Moonshot Factory (March 2022 – October 2022)
  - Build future developper tools with AI.
  - `https://x.company/`
- Summer Intern, Microsoft Research (June 2020 – Sep. 2020)
  - Conducted an longitudinal study with 17 families for 5 weeks evaluating a new programming platform for kids.
  - Analyzed and communicated findings in company wide presentations and public webinars
  - `https://www.microsoft.com/en-us/research/project/microsoft-tilecode/`
- Research Associate, CRI (Mar. 2011 – Jan. 2012)
  - Participated as a research associate in a project that applied machine learning algorithms for interdisciplinary online educational programs.
  - The proposal was validated by an international committee of researchers and involved collaborating with an international team of data scientists
  - `https://criparis.org`
- ICT Researcher, Open University UNIT (Jan 2009 – May. 200)

- Conducted a study for the French Ministry of Education on the use of digital resources in 20 universities and engineering schools.
- The study was published by UNIT and is now an industry standard guide in the participating universities.
- http://www.unit.eu/

Active Projects

- Cognimates : Live at cognimates.me
  - AI education platform for children to train their own machine learning models.
  - Users can also code smart games using their custom models.
- AI Literacy Playground : Live at http://aiplayground.me/
  - Playground for AI explainability allowing users to classify custom datasets.
  - Users may also identify anchors in images to support algorithms interpretability.
- TileCode : Live at https://microsoft.github.io/tilecode/
  - TileCode is an app for designing, coding, and playing video games directly on low-cost arcade gaming handhelds.
  - Our starting point are retro video games to be created via a set of visual rules.

Education

Degree	Major	Institution	Graduation Year	GPA
Ph.D Information School	Informatics	University of Washington	2023	3.9/4
Master of Science	Media Arts and Science	Massachusetts Institute of Technology	2018	5/5
Master of Science	Instructional Design,	Technical University of Lisbon, Poitiers University, UNED Madrid	2008	5/5
Bachelor of Communication	Public Relations & Communication	Polytechnic University of Timisoara	2005	5/5

Professional Experience

- Creative AI Track Lead, MIT MediaLab Berlin, Berlin, Germany (Jun. 2018 – Jul. 2018)
  - Designed and ran the machine learning for creative AI track, selected 10 participants from 300 applications.
  - Organized a series of lectures, talks, and sitevisits to partner organizations.
  - Mentored students on their projects, documented and published final results.
  - http://berlin.media.mit.edu
- Co-founder, HacKIDemia, Global (Jan. 2012 – Nov. 2020)
  - Overseeing HacKIDemia, a global organization for children STEM education.
  - We are designing a 21st century curriculum by using latest technologies and scientific inventions.
  - We trained local teams i n 40 countries with 600 mentors and 10.000 children involved to date.
  - https://hackidemia.com
- Computer Science Lead Teacher, Girls Who Code, U.S.A (Jun. 2016 – Sep. 2016)
  - Taught computer science to a group of 30 senior highschool students for 3 months as part of the Girls Who Code Program
  - Managed two teaching assistants and creatived curriculum for the hardware and robotics modules.
  - https://girlswhocode.com/
- R&D Specialist, Samsung research, U.S.A (Jan. 2016 – Jun. 2016)
  - Proposed new IoT communication protocols for low powered WiFi sensors.
  - Implemented a series of prototypes for detecting water leaks at scale by measuring pipes vibration.
  - This lead to a commercial product (Lotik) which is still being developed by Samsung.
  - https://samsungnext.com/

- Initiated the first maker camp in Berlin and Shenzhen with 15 global participants.
  - We used only upcycled materials and tools to build the first makerspace in a shipping container in Europe and China.
  - Each camp ran for one month, had 10 tracks, 20 mentors.oposed new IoT communication protocols for low powered WiFi sensors.
    - `https://makercampberlin.tumblr.com`
- Founder, Afrimakers, Africa (Jan. 2014 – Jan. 2016)
  - Created Afrimakers in partnership with 8 African techhubs in Egypt, Kenya, Tanzania, Rwanda, Zambia, Botswana, Ghana, Nigeria.
  - This initiative enables local makers to use digital fabrication for solving local challenges like access to clean water, energy, education.
    - `https://afrimakers.org`
- Education Advisor, Singularity University, U.S.A (Apr. 2012 – Sept. 2012)
  - Curated the education track for 80 students from 36 countries and conducted a series of prototyping workshops.
  - Initiated coaching sessions and sitevisits to pioneering edtech organizations like Khan Academy, Udacity, Gooru.
    - `https://singularityu.org`
- Volunteer Teacher, Catholic University of Peru, Cambodia (Jan. 2012 – Apr. 2012)
  - As part of a voluntary mission I was teaching 100 children how to use computers and new technologies.
  - Within 2 months I have acquired 3000 € in donations and created a computer lab for the children.
  - You can find out more here: teachingcambodia.blogspot.com.
    - `https://kkevcambodia.org`
- SQE Associate, Google, Ireland (Sept. 2010 – Jun. 2011)
  - Helped defend Google's index against webspam and collected data for search algorithm design.
  - Worked with the internal education team to improve the new hires training.
    - `https://google.com`
- ToT Trainer, Catholic University of Peru, Peru (Jan. 2008 – Apr. 2008)
  - Instructed 40 Peruvian primary school teachers in the use of information and communication technology.
  - Conducted a final evaluation which showed that 80% of the teachers were using the new tools.
    - `http://www.pucp.edu.pe`

Graduate Courses Taken

- Computer-Aided Reasoning for Software
- Machine Learning Fairness
- Data Management and Data Science
- Prototyping Interactive Devices with AI
- How to make almost anything
- Design Internet Research
- Culture Learning and Development
- Computer-Supported Collaborative Learning
- Child-Computer Interaction

Teaching Experience

- Designing Smart Toys at RISD
- Hacking Smart Toys at ITP NYU
- INFO 350 Information Ethics and Policy
- INFO 330 Research Methods

Service

- Chair for ACM FlorT 2024 Conf

- Chair for [IDC 2022 Conference](#)
- Chair for [IDC 2021 Conference](#)
- Student Volunteer for [ICER 2021](#)
- Reviewer for CHI, IDC, CSCW, Fablearn conferences from 2018-Present
- Research Committee Representative for [UW iSchool](#) student organization
- Volunteer with [iSchool Diversity Initiative](#) supporting BIPOC graduate applicants
- Chair of the [UW Computer Science Care Committee](#)
- Education Board member for Unesco MGIEP
- AI Education Committee member for [Technovation](#), organization for international AI Education for families
- Board member for [AIDA](#), organization using AI for social development

Talks

- Panelist for [AI Quality Conference](#) in San Francisco (June 2024)
- Panelist for [Conference on Discrimination in the 21st Century: Fostering Conversations Across Fields](#) at Chicago Booth (May 2024)
- Speaker at [Innovation Exchange Mohai](#) on Multimodal AI for Social Impact (April 2024)
- Speaker at [Night of Ideas Seattle](#) on AI, Language, Arts and Education (March 2024)
- Keynote at [Creativity Summit Sweden](#)on Generative AI Tools for Creators (June 2023)
- Webinar on [Generative AI](#)for MAKE Magazine (March 2023)
- Speaker at the US Chamber of Congress AI Commission on [Future Governance for Family AI Use and Literacy](#) (9 May 2022)
- Webinar on [Creativity in Data Science and Machine Learning](#) moderated by Comet ML (29 April 2022)
- Speaker on Talking Robotics Seminar on [Creative coding with AI Friends for Youth](#)(3 April 2022)
- Speaker a Computing Education Research Seminars [Democratizing AI education with and for families](#) with Raspberry Pi Foundation (1 Mar 2022)
- Speaker at mSchools EdChange [Machines & Humans Educational Perspectives](#) at the GSMA Mobile World Congress (2021)
- Webinar for teachers in Chile [La Democratización de la Inteligencia Artificial para los Niños](#) with Chilean British Institute (2021)
- Seminar on AI Education research [Why Teach and Learn AI?](#) for National Department of Education in France (2021)
- Webinar on [development of new coding platforms for children](#) with Microsoft Research (2020)
- Panel on future of [AI education with Unesco](#) (2020)
- Speaker at [Future of childhood Summit](#) with Google and Sesame Workshop (2020)
- Speaker at [Applied Machine Learning Days](#), EPFL (2020)
- Keynote at [Digital Summit for Teachers](#) organized by Korber Foundation (2019)
- Speaker at Teachers Colledge [AI Education Conference](#)(2019)
- Keynote at [Pydata Conference](#)(2019)
- Keynote at [Libre Learn Lab Conference](#)(2018)
- Guest [Cognimates tutorial on the Coding Train](#)(2018)

Press

- [Your Child's Next Playmate Could Be An AI Toy Powered By ChatGPT](#) for Forbes (2024)
- [Generative AI for Makers: AI Has Truly Arrived — and It's Here to Help You Make and Craft](#) for MAKE Magazine (2023)
- [Amazon Alexa Wants To Put Your Child To Bed With Generative AI Storytelling](#) for Forbes (2022)
- [DW TV Documentary: How artificial intelligence is changing our society](#) from DW German Public Broadcast (2020)
- [UW researchers receive grant to explore childhood AI literacy](#) for UW Daily (2020)
- [How is AI upgrading playtime?](#) for Canvas8 (2020)
- [The Hard Fun of Designing Alternatives to Smart Toys](#) for Processing Foundation (2019)
- [Where does AI fit in the classroom?](#) for Teachers College Newsroom (2019)
- [Will AI really transform education?](#) for Hechinger Report (2019)
- [How children understand artificial intelligence](#) for Teller Report (2019)
- [Artificial intelligence has to be demystified](#) for Spiegel (2019)
- [Spotlight: Let's ask more of AI](#) for Mozilla's Internet Report(2019)

- [Should Children Form Emotional Bonds With Robots?](#), The Atlantic (2017)
- [Growing Up with Alexa](#) MIT Technology Review (2017)
- [Understanding Generation Alpha](#) for Wired (2017)

Podcasts

- Your AI Roadmap: [Multimodal AI systems, LLMs @Google Gemini](#)(2024)
- Teachers' Voices: [How can educators use AI to support their students' learning?](#)(2023)
- TechnoGypsie: [Computer-supported programming & AI Education](#)(2022)
- Humanitarian AI: [AI literacy for families](#)(2021)
- Prof Talks: [AI Education & Smart Toy Design](#)(2020)
- Ed Tech: [Digging into Digital Skills Development](#)(2019)
- Meaningful Making: [What is AI](#)(2019)
- Airtalk: [They're alive! Are smart toys changing how children interact with humans?](#)(2017)
- CBC Radio: [Would you let your kids play with AI robots?](#)(2017)

Skills

- **Research**: `AI Education` * `Large Language Models` * `Program Synthesis` * `Interaction Design`
- **R&D**: `CAD design` * `Embedded programming` * `Digital fabrication`
- **Instructional Design**: `STEAM curriculum` * `Teacher training` * `Project-based teaching`
- **Programming Languages**: `R` * `Ruby` * `Python` * `Javascript` * `HTML`
- **Web Frameworks**: `React` * `Rails` * `Bootstrap`
- **Databases**: `MySQL` * `PostgreSQL`
- **Languages**: `Romanian` * `English` * `French` * `Spanish` * `Italian` * `Portuguese`

Languages

- Romanian
- English
- French
- Spanish
- Italian
- Portuguese

Passions

- Hosting a [radio show](#)
- Trail running and yoga [trips](#)
- Reading science fiction [books](#)