

Chris Samarinas

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SUMMARY

I'm a third year PhD student in Information Retrieval at UMass Amherst. My recent work is on conversational information seeking, representation learning and ranking for information retrieval. I'm leading our team at UMass in the Alexa Prize Taskbot Challenge 2. In the past, I have solved challenging NLP problems (contextual recommendations, conceptual search, relation extraction, fact-checking) at 3 AI start-ups (adtech, fintech, biotech) and in academia (NUS). My long-term goal is to help overcome the limitations of machine learning models (efficiency, robustness, limited training resources, grounding), and improve multimodal content organization & discovery.

EDUCATION

University of Massachusetts Amherst, Amherst, USA
M.Sc./PhD in Computer Science

September 2021 – 2026 (expected)

- Research in conversational information seeking at the [Center for Intelligent Information Retrieval](#) (CIIR)
- Supervisor: [Hamed Zamani](#)

Aristotle University of Thessaloniki, Thessaloniki, Greece
Bachelor of Science (B.Sc.) in Computer Science

October 2013 – Jun 2017

- GPA: **9.67**/10.00, ranked **1**/120, highest GPA since **1992** out of 2,500+ CS graduates, top **0.04%**
- Ranked **1**/120 in national university entrance exam in my department and top **0.2%** nationwide.
- Thesis: *Mining answers from the web using information retrieval techniques and machine learning*

WORK EXPERIENCE

University of Massachusetts Amherst, Amherst, USA
Research Assistant

September 2021 – 2026 (expected)

- Research Assistant at the [Center for Intelligent Information Retrieval](#), supervised by [Hamed Zamani](#).
- Research in *conversational information seeking* (conversational IR, clarifying questions).
- Team Lead for the [Alexa Prize Taskbot Challenge 2 \(2022\)](#)
- Team Member for the [Alexa Prize Taskbot Challenge \(2021\)](#)

Adobe Research, Remote, USA
Research Intern

June 2022 – December 2022

- Research in *multi-step query reformulation for dense retrieval* at the Real-time Experiences and Algorithms Lab (REAL) with [Xiang Chen](#) and [Saayan Mitra](#).

Ro5, Remote
Machine Learning Consultant (Knowledge Graph)

February 2021 – August 2021

- [Ro5](#) is a biotechnology company that accelerates drug discovery, development, repurposing, and clinical trials.
- Responsible for the automated construction of a *biomedical knowledge graph* from research papers.
- Worked on *biomedical entity extraction*, *supervised entity resolution* and *relation classification*.

National University of Singapore, Singapore
Research Assistant

February 2020 – April 2021

- Research on *latent retrieval for large-scale fact-checking and question answering* with prof. Wynne Hsu, president of [IDS](#) and prof. Mong Li Lee, president of [CTIC](#). (IEEE ICTAI 2020)
- Developed a framework for large-scale semantic search that returns text snippets related to questions or statements and deployed it in a real-world semantic search engine for COVID-19, launched by the president of NUS.
- Research on *multi-stage evidence retrieval for large-scale fact-checking*. (NAACL 2021) and on *explainable fake news detection based on content and social context*.

Plural AI, London, United Kingdom
Research Engineer

October 2018 – January 2020

- **Plural AI** is a fintech start-up that builds a *knowledge engine* for the finance industry. The company focuses on extracting content from corporate websites and financial statements to enrich a financial *knowledge graph*, and support question answering on complex financial queries.
- Developed a novel framework for *concept extraction* and *saliency scoring* from corporate websites. Owned the whole machine learning pipeline, from the *annotation tool development* and website crawling, to the productionization and deployment.
- Developed a smart tool for efficient curation of an industrial *category graph*.
- Developed a scalable semantic search service of companies using a novel *topic modeling* technique.

Donaco LTD, London, United Kingdom
Research Engineer

June 2018 – January 2019

- **Donaco** is an online advertising start-up that tries to revolutionize online donations.
- Designed a system for contextual recommendation of charity campaigns in news articles.

Freelance Software Engineer (early stuff)

2009 – November 2018

- My first YouTube utility app got over **1M** downloads and was **acquired** by a small company in Poland.
- Developed a metasearch engine for a client in Germany.
- Developed a location-based web search interface for a client in Canada.
- Developed and sold a script that bypassed Google's Custom Search API limitations and offered an interface for 'instant search', which among others was also used by a **company** in Turkey that got **\$2.5M** government funding.
- I was a short-term contractor for the development of the new version of the *historical* **HotBot** metasearch engine.

RECENT & ONGOING RESEARCH

Fine-Tuning Language Models for End-to-End Task-Oriented Dialogue

Chris Samarinas, Pracha Promthaw, Atherva Nijasure, Hamed Zamani, *work in progress*

ProCIS: A Large-Scale Dataset for Proactive Conversational Information Seeking

Chris Samarinas, Hamed Zamani, *work in progress*

Multi-Modal Augmentation for Large Language Models with Applications to Task-Oriented Dialogues

Chris Samarinas, Pracha Promthaw, Rohan Lekhwani, Sheshera Mysore, Sung Ming Huang, Atharva Nijasure, Hansi Zeng, Hamed Zamani, proceedings of the *Alexa Prize Taskbot Challenge 2022*

Revisiting Open Domain Query Facet Extraction and Generation - [[code](#)]

Chris Samarinas, Arkin Dharawat, Hamed Zamani, long paper at *ICTIR 2022*

MarunaBot: An Extensible Retrieval-Focused Framework for Task-Oriented Dialogues

Amit Hattimare, Arkin Dharawat, Yelman Khan, Yen-Chieh Lien, Chris Samarinas, George Wei, Yulin Yang, Hamed Zamani, proceedings of the *Alexa Prize Taskbot Challenge 2021*

Improving Evidence Retrieval for Automated Explainable Fact-Checking - [[code](#)]

Chris Samarinas, Wynne Hsu, Mong Li Lee, system demonstration at *NAACL 2021*

Latent Retrieval for Large-Scale Fact-Checking and Question Answering with NLI Training

Chris Samarinas, Wynne Hsu, Mong Li Lee, long paper at *IEEE ICTAI 2020*, **25%** acceptance rate [[code](#)] [[news](#)] [[blog post](#)]

SKILLS

Programming languages

Python, Java, C, C++, Prolog

Web development

JavaScript, HTML5, PHP, MySQL, MongoDB

Machine Learning

Tensorflow, PyTorch

Others

Kubernetes, neo4j, GCP, Latex, Android development

AWARDS

Bioengineering Hackathon, 1st place , <i>EMB IEEE Student Chapter AUTH, StudentGuru</i>	2018
1st place for developing DropSense in 48 hours, a platform that monitors and connects elderly with their relatives and paid carers using Wear OS smartwatches.	
Hackathon Thessaloniki, Honor , <i>Municipality of Thessaloniki</i>	2014
awarded for developing CityReport in 24 hours, an online web application for instant issues reporting	
Great Moment for Education Scholarship, Award , <i>Eurobank Ergasias</i>	2013
scholarship for achieving the highest grade at school at the national university admission examination	
National Mathematical Olympiad, First Prize , <i>Hellenic Mathematical Society</i>	2009
awarded for competing in the final stage “Archimedes”, top 50 out of over 20,000 participants	

GRANTS

Bodossaki Foundation PhD scholarship , <i>Bodossaki Foundation</i>	2021
\$60,000 scholarship for my 5-year PhD studies in Information Retrieval	
Tensorflow Research Cloud Program , <i>Google</i>	2020
Granted free access to TPU pods for 6 months for our project on large-scale latent retrieval	
Innovate UK Smart Grant , <i>UK Research and Innovation</i> , 1% acceptance rate	2019
£400,000 for our work at Plural AI, building a knowledge engine for the finance industry	
Horizon 2020 Grant , <i>EU Funding for Research and Innovation</i> , 16% acceptance rate	2019
£50,000 for our research at Plural AI on entity extraction and semantic search	

SERVICE & MENTORING

Reviewer:

- ACM Transactions on Information Systems (TOIS)

Mentor:

- 2022 Early Research Scholars Program (ERSP) at UMass
- PhD Applicant Support Program (PASP) at UMass
- Supervised 3 master's and 1 undergraduate students on research projects