Ananth Mahadevan

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Education

- **University of Helsinki** — Helsinki, Finland
  PhD in Computer Science — *Aug 2020 - present*
  - Researcher in Algorithmic Data Science group
  - Supervisor: Prof. Michael Mathioudakis
  - **Thesis Topic**: Scaling and Maintaining Machine Learning Pipelines

- **Aalto University** — Otaniemi, Finland
  Master of Science in Machine Learning, Data Science and AI — *Sep 2018 - May 2020*
  - Full Tuition Scholarship Student
  - **Thesis Topic**: Vote Prediction Models for Signed Social Network

- **R.V College Of Engineering** — Bangalore, India
  Bachelor of Engineering in Computer Science and Engineering — *Aug 2014 - May 2018*
  - 3rd rank in department
  - **Thesis Topic**: *"Extract-Transform-Load of Financial Transaction Tax data using Elasticsearch"*

Work Experience

- **University of Helsinki** — Helsinki, Finland
  Teaching Assistant, Network Analysis — *Jan 2021- Mar 2021*
  - Worked with *Prof.* Michael Mathioudakis
  - Created and graded assignments
  - Organized tutorials on advanced concepts

- **Aalto University** — Otaniemi, Finland
  Research Assistant, Data Mining Group — *May 2019- May 2020*
  - Worked with *Prof.* Aristides Gionis and Bruno Ordozgoiti
  - **Wikipedia RfA Project**: predicting voter behaviour in Wikipedia elections networks
  - **Diversified Item Selection Project**: implemented and scaled up experiments

- **Aalto University** — Otaniemi, Finland
  Teaching Assistant, Algorithmic Methods of Data Mining — *Sep 2019- Dec 2019*
  - Worked with *Prof.* Aristides Gionis and other teaching assistants
  - Created assignments and arranged exercise sessions
  - Managed course graders and project on balanced graph clustering

- **Goldman Sachs** — Bangalore, India
  Summer Thesis Worker — *Jan 2018 - May 2018*
  - Worked in **Client Experience Engineering** team on **client email prioritization**
  - Used **Conditional Random Fields** (CRFs) to tag and remove *disclaimers* from client emails
  - Performed **sentiment analysis** and Named Entity Recognition(NER) on emails
  - Platforms Utilized: pycrfsuite, sklearn, Protobuf, spaCy, Stanford CoreNLP

- **Goldman Sachs** — Bangalore, India
  Summer Analyst — *May 2017 - July 2017*
  - Worked in **Tax Operations Technology** team
  - Imported large volume tax from DB2, Sybase IQ databases to **Elasticsearch** cluster
  - Set up, maintained and optimized multi-node Elasticsearch cluster in production environment

Skills

Languages: Python, C/C++, Unix Shell, R

Machine Learning Frameworks: PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, CUDA

Graph and Network Tools: NetworkX, PyTorch Geometric, SNAP

Database Tools: Spark, Neo4J, MariaDB, Elasticsearch

Miscellaneous: Excellent troubleshooting and debugging skills

Languages

Mother Tongue: Tamil

English: Proficiency Level: C2. IELTS score: 8.5

Hobbies and Extracurricular Activities

Parliamentary Debating

- **President** of Helsinki Debating Society (HDS) from Sep 2020 till Jan 2023
- **Finnish Debate Champion 2019** at FINDA University Championship 2019, Finland

Publications

- Ananth Mahadevan and Michael Mathioudakis. Cost-aware retraining for machine learning. *Knowledge-Based Systems*, 293:111610, 2024

- Ananth Mahadevan, Michael Mathioudakis, Eetu Mäkelä, and Mikko Tolonen. Optimizing a data science system for text reuse analysis. *arXiv*, 2024

- Yann Ryan, Ananth Mahadevan, and Mikko Tolonen. A comparative text similarity analysis of the works of bernard mandeville. *Digital Enlightenment Studies*, 1:28 – 58, 2023

- David Rosson, Eetu Mäkelä, Ville Vaara, Ananth Mahadevan, Yann Ryan, and Mikko Tolonen. Reception reader: Exploring text reuse in early modern british publications. *Journal of Open Humanities Data*, Apr 2023

- Ananth Mahadevan, Arpit Merchant, Yanhao Wang, and Michael Mathioudakis. Robustness of sketched linear classifiers to adversarial attacks. In *Proceedings of the 31st ACM International Conference on Information & Knowledge Management*, CIKM '22, pages 4319–4323, 2022

- Arpit Merchant, Ananth Mahadevan, and Michael Mathioudakis. Scalably using node attributes and graph structure for node classification. *Entropy*, 24(7), 2022

- Ananth Mahadevan and Michael Mathioudakis. Certifiable unlearning pipelines for logistic regression: An experimental study. *Machine Learning and Knowledge Extraction*, 4(3):591–620, 2022

- Bruno Ordozgoiti, Ananth Mahadevan, Antonis Matakos, and Aristides Gionis. Provable randomized rounding for minimum-similarity diversification. *Data Mining and Knowledge Discovery*, 36(2):709–738, March 2022

Links and Other details

Date of Birth 31st July 1996

Nationality Indian

GitHub `https://github.com/ananth1996` **GitLab** `https://version.helsinki.fi/mahadeva`

LinkedIn `www.linkedin.com/in/ananth-mahadevan-75411651`

University Profile `https://researchportal.helsinki.fi/en/persons/ananth-mahadevan`

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