

# NIVASINI ANANTHAKRISHNAN

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## EDUCATION

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**University of California Berkeley**

September 2021 - Present

Ph.D. in Computer Science

**University of Waterloo**

May 2021

M.Math. in Computer Science

Advisor : [Prof. Shai Ben-David](#)

**University of Waterloo**

August 2019

B.Math. *with Distinction - Dean's Honours List (Highest Honours)*

Majors : Computer Science, Combinatorics and Optimization

## PUBLICATIONS

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- **Identifying regions of trusted predictions.** *Uncertainty in Artificial Intelligence (UAI), 2021* ([PDF](#))  
Nivasini Ananthakrishnan, Shai Ben-David, Tosca Lechner, Ruth Urner.
- **On learnability with computable learners.** *International Conference on Algorithmic Learning Theory (ALT), 2020* ([PDF](#))  
Sushant Agarwal, Nivasini Ananthakrishnan, Shai Ben-David, Tosca Lechner, Ruth Urner.

## PAPERS UNDER REVIEW

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- **Classification confidence scores with point-wise guarantees.** *Manuscript in submission.*  
Nivasini Ananthakrishnan, Shai Ben-David, Tosca Lechner. ([PDF](#))
- **Multi-level regret minimization for multi-armed bandits.** *Manuscript in submission.*  
Nivasini Ananthakrishnan, Lin Yang, Csaba Szepesvári. ([PDF](#))
- **A different view of fair data representation.** *Manuscript in submission.*  
Tosca Lechner, Nivasini Ananthakrishnan, Sushant Agarwal, Shai Ben-David. ([PDF](#))

## AWARDS AND GRANTS

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- NSERC (National Science and Engineering Research Council) Canada Graduate Scholarship - Masters, 2020.
- David R. Cheriton Graduate Scholarship, 2019-2020.
- NSERC Undergraduate Research Award, 2019.

## RESEARCH EXPERIENCE

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**University of Waterloo**

Waterloo, Canada

Graduate research assistant

September 2018 - Present

Advisor : [Prof. Shai Ben-David](#)

Research in topics such as interpretability and fairness in machine learning and distribution dependent generalization bounds.

**Alberta Machine Intelligence Institute***Research intern*

Edmonton, Canada

*May 2020 - Present*Advisors : [Prof. Csaba Szepesvári](#), [Prof. Lin Yang](#)

Research in multi-armed bandits and MDPs with multiple objectives.

**University of Waterloo Computational Health Informatics Lab***Undergraduate research assistant*

Waterloo, Canada

*May 2018 - August 2018*Advisor : [Prof. Jesse Hoey](#)

Used Natural Language Processing techniques to develop algorithms to evaluate quality of online content on Alzheimer's Disease.

**University of Waterloo Databases department***Waterloo, Canada*

Undergraduate research assistant

*September 2017 - December 2017*Advisor : [Prof. Grant Weddell](#)

Studied addition of restricted inverse features to a Description Logic dialect. Investigated optimizing the handling of equality relation in a database management system's reasoner.

## INDUSTRY EXPERIENCE

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**Microsoft***Data Scientist Intern*

Vancouver, Canada

*June 2021 - August 2021*

Worked in the security team on automatic security threat detection.

**SideFX Software***Software Developer Intern*

Toronto, Canada

*May 2017 - August 2017*

Revamped the mesh parameterization tool by increasing accuracy and adding features for more user control. Implemented research on computational optimization techniques and image segmentation.

**IBM - J9 Virtual Machine Team***Software Developer Intern*

Ottawa, Canada

*May 2016 - August 2016*

Designed, prototyped and documented an implementation of proposed Java feature - Value Types in the Virtual Machine.

## ACTIVITIES

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- Teaching Assistant for courses - Statistical and computational foundations of Machine Learning (CS 485), Logic and computation (CS 245), Operating systems (CS 350).
- Reviewer for journal [Neurocomputing](#) (2020).
- [Technovation](#) mentor - Mentored team of high school girls to build mobile app (January 2019 - December 2019).