

HAZEL DOUGHTY

hazel.doughty@uva.nl ♦ [hazeldoughty.github.io](https://github.com/hazeldoughty) ♦ [Google Scholar](#)

RESEARCH FOCUS

My research focus is fine-grained video understanding with limited labeled data. Particularly, I have explored challenging problems including assessing skill in video, recognizing adverbs, weak-supervision from narrations domain adaptation, self-supervision and learning video-text embeddings.

RESEARCH EXPERIENCE

Post-Doctoral Researcher, Informatics Institute, University of Amsterdam Dec 2020-Dec 2023
Working with Prof. Cees Snoek and 3 PhD students on topics in video understanding, including self-supervised learning, multi-modal learning, open-set and domain adaptation.

Visiting Researcher, INRIA, Paris Jan 2019-March 2019
Visited the Willow Research Group and worked with Prof. Ivan Laptev on understanding adverbs from instructional videos.

EDUCATION

PhD in Computer Vision, Department of Computer Science, University of Bristol Sep 2016-Sep 2020
Supervisors: Prof. Walterio Mayol-Cuevas, Prof. Dima Damen
Thesis: Skill Determination from Long Videos
Examiners: Prof. Josef Sivic and Prof. William T. Freeman
EPSRC DTP Funding
EPSRC Project Glance (EP/N013964/1)

MEng in Computer Science, Department of Computer Science, University of Bristol Sep 2012-June 2016
First Class Degree - Top Ranked Graduate

PUBLICATIONS

How Severe is Benchmark-Sensitivity in Video Self-Supervised Learning?
Fida Mohammad Thoker, Hazel Doughty, Piyush Bagad and Cees G. M. Snoek.
European Conference on Computer Vision (ECCV), 2022

How Do You Do It? Fine-Grained Action Understanding with Pseudo-Adverbs
Hazel Doughty and Cees G. M. Snoek
Conference on Computer Vision and Pattern Recognition (CVPR), 2022

Audio-Adaptive Activity Recognition Across Video Domains
Yunhua Zhang, Hazel Doughty, Ling Shao and Cees G. M. Snoek
Conference on Computer Vision and Pattern Recognition (CVPR), 2022

Rescaling Egocentric Vision: Collection, Pipeline and Challenges for EPIC-KITCHENS-100
Dima Damen, Hazel Doughty, Giovanni Maria Farinella, Antonino Furnari, Evangelos Kazakos, Jian Ma, Davide Moltisanti, Jonathan Munro, Toby Perrett, Will Price, Michael Wray.
International Journal of Computer Vision (IJCV), 2021

Skeleton-Contrastive 3D Action Representation Learning
Fida Mohammad Thoker, Hazel Doughty, Cees Snoek
ACM International Conference on Multimedia (ACMMM), 2021

On Semantic Similarity in Video Retrieval
Michael Wray, Hazel Doughty, Dima Damen
Conference on Computer Vision and Pattern Recognition (CVPR), 2021

The EPIC-KITCHENS Dataset: Collection, Challenges and Baselines
Dima Damen, Hazel Doughty, Giovanni Maria Farinella, Sanja Fidler, Antonino Furnari, Evangelos Kazakos, Davide

Moltisanti, Jonathan Munro, Toby Perrett, Will Price, Michael Wray
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020

Action Modifiers: Learning from Adverbs in Instructional Videos
Hazel Doughty, Ivan Laptev, Walterio Mayol-Cuevas, Dima Damen
Conference on Computer Vision and Pattern Recognition (CVPR), 2020

The Pros and Cons: Rank-aware Temporal Attention for Skill Determination in Long Videos
Hazel Doughty, Walterio Mayol-Cuevas, Dima Damen
Conference on Computer Vision and Pattern Recognition (CVPR), 2019

StopWatch: The Preliminary Evaluation of a Smartwatch-based System for Passive Detection of Cigarette Smoking
Andrew L Skinner, Christopher J Stone, Hazel Doughty and Marcus R Munfo
Nicotine and Tobacco Research, 21(2), 2019

Scaling Egocentric Vision: The EPIC-KITCHENS Dataset
Dima Damen, Hazel Doughty, Giovanni Maria Farinella, Sanja Fidler, Antonino Furnari, Evangelos Kazakos, Davide Moltisanti, Jonathan Munro, Toby Perrett, Will Price, Michael Wray
European Conference on Computer Vision (ECCV), 2018. (Oral)

Who's Better? Who's Best? Pairwise Deep Ranking for Skill Determination
Hazel Doughty, Dima Damen, Walterio Mayol-Cuevas
Conference on Computer Vision and Pattern Recognition (CVPR), 2018. (Spotlight)

SUPERVISION

| | |
|---|--------------|
| Fida Mohammad Thoker, PhD Student (with Cees Snoek) | 2021-present |
| Yunhua Zhang, PhD Student (with Cees Snoek) | 2021-present |
| Sarah Rastegar, PhD Student (with Cees Snoek) | 2020-present |
| Piyush Bagad, MS Intern (with Cees Snoek) | 2021-2022 |
| Michael Kozak, Master's Thesis | 2021 |
| Chang Liu, Master's Thesis | 2020-2021 |
| Oguzhan Kizltepe, Master's Thesis | 2020 |

AWARDS, HONOURS & DISTINCTIONS

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|---|---------------|
| ELLIS Member | since 2022 |
| Outstanding Reviewer for European Conference on Computer Vision (ECCV) | 2022 and 2020 |
| Outstanding Reviewer for Conference on Computer Vision and Pattern Recognition (CVPR) | 2021 |
| Outstanding Reviewer for International Conference on Computer Vision (ICCV) | 2021 |
| Outstanding Reviewer for Asian Conference on Computer Vision (ACCV) | 2020 |
| British Machine Vision Association Travel Bursary (£750) | 2019 |
| Women in Computer Vision Travel Grant (\$500) | 2019 |
| EPSRC Doctoral Training Program Funding | 2016-2020 |
| Top Graduating MEng Student, Department of Computer Science | 2016 |
| Best Research MEng Project, Department of Computer Science | 2016 |

REVIEWING DUTIES

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|---|-----------|
| Conference on Computer Vision and Pattern Recognition | 2020-2023 |
| International Conference on Computer Vision | 2019-2021 |
| European Conference on Computer Vision | 2020-2022 |
| Transactions on Pattern Machine Intelligence | 2020-2022 |
| International Journal of Computer Vision | 2020-2022 |
| Winter Conference on Applications of Computer Vision | 2020-2021 |
| Conference on Neural Information Processing Systems | 2022 |

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| International Conference on Learning Representations | 2021 |
| AAAI Conference on Artificial Intelligence | 2020 |
| Asian Conference on Computer Vision | 2020 |

ORGANIZATION

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|---|--------------------|
| Netherlands Conference on Computer Vision | 2022 |
| Workshop on Pre-registration in ML | NeurIPS 2021 |
| Structured Representations for Video Understanding Workshop | ICCV 2021 |
| Women in Computer Vision Workshop | CVPR 2020 |
| Egocentric Perception, Interaction and Computing Workshop | CVPR and ECCV 2020 |

INVITED TALKS & PANELS

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|---|------|
| Understanding Actions in Video, <i>Guest Lecture</i> , University of Catania | 2022 |
| Finer-Grained Video Understanding, <i>Invited Talk</i> , Video Understanding Symposium | 2022 |
| Women in Computer Vision Panel, <i>Panelist</i> , WiCV Workshop at CVPR | 2022 |
| Understanding Actions in Video, <i>Invited Talk</i> , Computer Vision by Learning ASCI Course | 2022 |
| Introduction to Video Understanding, <i>Guest Lecture</i> , Computer Vision II, University of Amsterdam | 2021 |
| What Are You Doing and How Are You Doing It?, <i>Invited Talk</i> , University of Toronto | 2021 |
| Action Modifiers, <i>Spotlight</i> , Video Pentathlon Workshop at CVPR | 2020 |
| Skill Determination in Video, <i>Invited Talk</i> , Microsoft Research Cambridge | 2019 |
| Who's Better? Who's Best?, <i>Spotlight</i> , CVPR | 2018 |
| Skill Determination from Egocentric Video, <i>Spotlight</i> , EPIC Workshop at ICCV | 2017 |

TEACHING

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| <i>Unit Director</i> , Informatics Institute, University of Amsterdam | 2022 |
| Leren & Beslissen (English: Learning and Decision Making), Y2 Bachelor's in AI | |
| <i>Teaching Assistant</i> , Department of Computer Science, University of Bristol | 2016-2020 |
| Multiple undergraduate Computer Science courses including: Data Structures and Algorithms (Y2), Symbols, Patterns and Signals (Y2), Advanced Algorithms (Y3), Applied Deep Learning (Y4) | |

REFERENCES

| | |
|---|---------------------------------|
| Cees Snoek, Professor, University of Amsterdam | <i>C.G.M.Snoek@uva.nl</i> |
| Dima Damen, Professor, University of Bristol | <i>Dima.Damen@bristol.ac.uk</i> |
| Josef Sivic, Distinguished Researcher, Czech Technical University | <i>josef.sivic@cvut.cz</i> |