

Dr Anil Bas

Research Fellow | Bournemouth University

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EMPLOYMENT

CfACTs Research Fellow
Bournemouth University, UK

📅 25 Oct 2023 – Present 🏢 Centre for Applied Creative Tech.

- Part of National Centre for Computer Animation (NCCA)
- Funded by the MSCA COFUND Fellowship Scheme

Assistant Professor
Marmara University, Turkey

📅 21 Aug 2020 – Oct 2023 🏢 Dept of Computer Engineering

- Deputy Head of Department, Dec 2021 – Oct 2023
- Erasmus Coordinator

Research Associate
Marmara University

📅 03 Sep 2018 – Aug 2020 🏢 Dept of Computer Engineering

Internships

Meteksan System Inc.

📅 Jun 2010 – Jul 2010 🏢 Software Department

Dataseel Information Systems Co.

📅 Jun 2009 – Jul 2009 🏢 R&D Department

Turkish Ministry of Energy and Natural Resources

📅 Jul 2007 – Aug 2007 🏢 Data Processing Centre

AWARDS & ACHIEVEMENTS

🏆 **Research Fellowship, 2023 – 2025**
MSCA COFUND Postdoctoral Fellowship Scheme

🏆 **Best Presentation Award, 2022**
IEEE Int. Conference on Computer and Applications

🏆 **First Prize at TEKNOFEST, 2022**
Technology for Humanity Competition

🌟 **Publication Incentive Award, 2020**
TUBITAK (Turkish Research Council)

✈ **Travel Bursary for International Conferences, 2017**
The British Machine Vision Association, UK

🏆 **Finalist (Science Category), 2016**
PhD Spotlight Competition, University of York, UK

🎓 **Fully Funded PhD Scholarship, 2014 – 2018**
YOK (Turkish Higher Education Council)

🔄 **Erasmus Exchange Student, 2010 – 2011**
Warsaw University of Technology, Poland

EDUCATION

PhD, Computer Science
University of York, UK

📅 01 Oct 2014 – 14 Sep 2018

- Thesis: What Does 2D Geometric Information Really Tell Us About 3D Face Shape?
- Supervisor: Prof William AP Smith

MSc, Computer Engineering
Selcuk University, Turkey

📅 08 Sep 2011 – 10 Sep 2013 📍 High Honour Student

- Thesis: Real-time Motion Recognition for Interactive Applications
- Supervisor: Prof H Erdinc Kocer

AA, Public Relations and Advertising
Anadolu University, Turkey

📅 22 Sep 2008 – 31 May 2010 📍 Honour Student

BSc, Electronics and Computer Education
Kocaeli University, Turkey

📅 06 Sep 2007 – 28 Jun 2011 📍 Honour Student

SERVICE & ACTIVITIES

Visiting Scholar

Stellenbosch University, South Africa (1 – 29 Jul 2022)
School for Data Science and Computational Thinking

External Consultant

TUBITAK (Turkish Research Council)
4006 Science Fair Support Programme

TEKNOFEST Advisory Committee
Unmanned Underwater Systems Competition, 2021
Technology for Humanity Competition, 2020

Reviewer

IJCV MVA IET CV HCIS CAE

Program Committee Member

IEEE Int. Conf. on Computer & Apps. (ICCA 2023)

IEEE Innov. Intel. Sys. Apps. Conference (ASYU 2020)

IEEE Signal Processing and Communications (SIU 2018)

University of York Doctoral Symposium (YDS 2016)

Student Assistant

The British Machine Vision Conference (BMVC 2016)

PROJECTS

Postdoctoral Researcher

NeRF and Model Based Face Analysis in the Wild

📅 25 Oct 2023 – Present

📄 MSCA COFUND Postdoctoral Fellowship

- **Member:** Anil Bas (PI), Advisors: Oleg Fryazinov (Primary), Xiaosong Yang (Secondary) and Jian Chang (Head of CFACTS)
- **Host:** Bournemouth University, [bournemouth.ac.uk/cfacts-research](https://www.bournemouth.ac.uk/cfacts-research)

The project investigates the application of deep learning-based 3D face models in fields where virtual avatars are becoming increasingly popular, such as digital entertainment, gaming and virtual reality. It will address the limitations of current 3D facial reconstruction methods by developing a new framework that combines the strengths of 3D Morphable Models (3DMM) with Neural Radiance Fields (NeRF) and Gaussian Splatting (GS).

Senior Researcher

AI as Author: Bridging the Gap Between Computational Creativity Techniques and Literary Theory

📅 01 Jan 2020 – 01 Oct 2023

📄 TUBITAK 2232 – International Fellowship for Outstanding Researchers

- **Members:** Imke van Heerden (PI), Anil Bas, et al.
- **Host:** Koc University, authorai.ku.edu.tr
- **Budget:** 1,421,384 TL

- The first AI-assisted poetry collection in Afrikaans: *Silwerwit in die soontoe* [Silverwhite into the Distance]

Select Book Media Coverage:

- Die wonder van willekeur [The wonder of randomness]. *Rapport* (Newspaper), p. 14, 16 Apr 2023.
- *Silwerwit in die soontoe*: 'n Resensie [Silverwhite into the Distance: A Review]. *LitNet* (Literary Magazine), 6 Apr 2023.
- KI dig nou ook in Afrikaans [AI now writes poetry in Afrikaans as well]. *Die Burger* (Newspaper), p. 11, 27 Mar 2023.
- Gedigte deur 'n masjien laat Afrikaans surrealisties dans [Poems by a machine make Afrikaans dance surrealistically]. *Rapport* (Newspaper), p. 15, 19 Feb 2023.
- Further coverage in Netwerk24 and Versindaba, among others. [Link](#).

Select Project Media Coverage:

- Kunsmatige intelligensie: Kan 'n bot die Hertzogprys wen? [AI: Could a Bot Win the Hertzog Prize?]. *LitNet*, 13 Jan 2023.
 - Rekenaar wat kan dig? [A Computer Composing Poetry?]. *Kletskompas* (Namibian TV), 9 Jun 2022.
 - Robotdigkuns [Robot Poetry]. *Taalgenoot* [Language Companion] (Magazine), pp. 62–65, Spring 2022.
 - AI Still Writes Lousy Poetry. ZDNet (Global Tech News), 3 Jun 2021. [Link](#).
 - Mens en Masjien Dig Saam [Man and Machine Compose Poetry]. eNCA (News Channel Africa), 20 Apr 2021. [Link](#).
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Principal Investigator

Data Processing with Clustering Algorithms for Vehicle Routing Problems

📅 07 Jan 2022 – 07 Jun 2023

📄 Marmara University Scientific Research Unit

- **Members:** Anil Bas (PI), Kerem Buyukozdemir and Kazim Yildiz
 - **Host:** Marmara University
 - **Budget:** 20,000 TL
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Researcher

Location Optimisation of Underground and Aboveground Containers and Development of a Dynamic, Intelligent and Sustainable Scheduling for Solid Waste Collection in Urban Areas: A Case Study of Maltepe Municipality

📅 01 Apr 2020 – 10 Aug 2022

📄 Newton Fund – Royal Academy of Engineering, UK

- **Members:** Onder Demir (PI), Anil Bas, et al.
 - **Collaboration:** Marmara University, Sheffield Hallam University and Maltepe Municipality, Istanbul
 - **Budget:** 78,792 GBP
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Academic Consultant

Parkjet: Digital Parking Solutions – Automatic Number Plate Recognition (ANPR) System

📅 01 May 2021 – 01 Dec 2021

📄 Altamira Digital Ventures

Journal Articles

- Imke van Heerden, Cagdas Duman, and **Anil Bas**. Performing the Post-Anthropocene: AI – *When a Robot Writes a Play*, *TDR: The Drama Review*, 67, 4, pp. 104–120, 2023, DOI: 10.1017/S1054204323000448.
- **Anil Bas**. Automatic Image Stitching Using SURF and RANSAC Based Homography Estimation, *Journal of Polytechnic*, 25, 2, pp. 597–604, 2022, DOI: 10.2339/politeknik.768444.
- Imke van Heerden and **Anil Bas**. AI as Author – Bridging the Gap Between Machine Learning and Literary Theory, *Journal of Artificial Intelligence Research*, 71, pp. 175–189, 2021, DOI: 10.1613/jair.1.12593, URL: authorai.ku.edu.tr.
- M Onat Topal, Imke van Heerden, and **Anil Bas**. Use of Artificial Intelligence in Legal Technologies: A Critical Reflection, *Exchanges: The Interdisciplinary Research Journal*, 8, 3, pp. 35–44, 2021, DOI: 10.31273/eirj.v8i3.788.
- M Onat Topal, Imke van Heerden, and **Anil Bas**. Dogal Dil Isleme ve Yapay Zekanin Hukuk Dunyasina Etkisi [The Impact of Natural Language Processing and Artificial Intelligence on the Legal World], *İktisat ve Toplum Dergisi (Journal of Economics and Society)*, 130, pp. 57–63, 2021, URL: iktisatvetoplum.com/dogal-dil-isleme-ve-yapay-zekanin-hukuk-du%CC%88nyasina-etkisi-mahir-onat-topal-imke-van-heerden-anil-bas/.
- **Anil Bas** and H Erdinc Kocer. Real-Time Hand Motion Recognition: A Robust Low-Cost Approach, *Balkan Journal of Electrical and Computer Engineering*, 9, 3, pp. 229–234, 2021, DOI: 10.17694/bajece.845276.
- Kazim Yildiz, Engin Gunes, and **Anil Bas**. CNN-Based Gender Prediction in Uncontrolled Environments, *Duzce University Journal of Science and Technology*, 9, 2, pp. 890–898, 2021, DOI: 10.29130/dubited.763427.
- Baris Dogan, Buket Dogan, Eyup Emre Ulku, **Anil Bas**, and Hasan Erdal. The Role of the Maker Movement in Engineering Education: Student Views on Key Issues of Makerspace Environment, *International Journal of Engineering Education*, 36, 4, pp. 1161–1169, 2020, URL: ijee.ie/contents/c360420.html.
- **Anil Bas** and William Smith. What Does 2D Geometric Information Really Tell Us About 3D Face Shape?, *International Journal of Computer Vision*, 127, 10, pp. 1455–1473, 2019, DOI: 10.1007/s11263-019-01197-x, URL: www-users.york.ac.uk/~waps101/faceambiguity/.

Books & Book Chapters

- Imke van Heerden, **Anil Bas**, and Etienne van Heerden. *Silwerwit in die soontoe: Afrikaans se eerste KI-gedigte [Silverwhite into the Distance: The First AI Poetry in Afrikaans]*, De Kelders: Naledi Publishers, 2023, URL: naledi.co.za/product/silwerwit-in-die-soontoe/.
- Imke van Heerden, **Anil Bas**, and Etienne van Heerden. Afrikaans se Eerste KI-Gedigte [Afrikaans's First AI Poems], in *Ons Klyntji*, 125, pp. 52–56, 2021, URL: litnet.co.za/afrikaans-se-eerste-ki-gedigte/.
- Banu Calis, Buket Dogan, Kazim Yildiz, **Anil Bas**, Onder Demir, and Eyup Emre Ulku. Knowledge Management Strategies for Higher Education, in *Enhancing Academic Research and Higher Education with Knowledge Management Principles*, pp. 110–127, 2021, DOI: 10.4018/978-1-7998-5772-3.ch007.

Conference Proceedings

- **Anil Bas**, M Onat Topal, Cagdas Duman, and Imke van Heerden. A Brief History of Deep Learning-Based Text Generation, in *Proc IEEE International Conference on Computer and Applications (ICCA)*, Cairo, Egypt, 2022, DOI: 10.1109/ICCA56443.2022.10039545.
- Imke van Heerden and **Anil Bas**. Poetry Machines: Co-Creative Writing with Artificial Intelligence, in *Proc International Humanities – Society – Identity Congress*, Warsaw, Poland, 2022.
- Cagdas Duman, Imke van Heerden, and **Anil Bas**. Artificial Intelligence and Authorship Through a Literary Lens, in *Proc EMERGE 2022 Digital Society Now*, Belgrade, Serbia, 2022.
- Maxine Gee, Imke van Heerden, and **Anil Bas**. A Meeting: AI-Assisted Screenplay Generation, in *Proc Globalizing Screenwriting: 14th Screenwriting Research Network Conference (SRN)*, Vienna, Austria, 2022.
- Cagdas Duman, Imke van Heerden, and **Anil Bas**. Android Actors and Artificial Authors: Re-Imagining Theatre in the Algorithmic Age, in *Proc XXIII Congress of the International Comparative Literature Association (ICLA)*, Tbilisi, Georgia, 2022.
- Imke van Heerden and **Anil Bas**. AfriKI: Machine-in-the-Loop Afrikaans Poetry Generation, in *Proc European Chapter of the Association for Computational Linguistics (EACL) Workshop on Bridging Human-Computer Interaction and Natural Language Processing*, pp. 74–80, Kiev, Ukraine, 2021, URL: aclanthology.org/2021.hcinlp-1.12/.

- M Onat Topal, **Anil Bas**, and Imke van Heerden. Exploring Transformers in Natural Language Generation: GPT, BERT, and XLNET, in *Proc International Conference on Interdisciplinary Applications of Artificial Intelligence (ICIDAAI)*, Yalova, Turkey, 2021.
- Cagdas Duman, Imke van Heerden, and **Anil Bas**. Binary Selves, Endless Becomings: Datafication and Emancipation in AI – *When a Robot Writes a Play*, in *Proc Digital Research in Humanities and Arts Conference (DRHA)*, Berlin, Germany, 2021.
- Kerem Buyukozdemir, Kazim Yildiz, **Anil Bas**, and Banu Calis. A Review of Heuristic Approaches to Vehicle Routing Problems, in *Proc IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)*, Brisbane, Australia, 2021, DOI: 10.1109/CSDE53843.2021.9718378.
- Hatice Sahin Akdas, Onder Demir, Buket Dogan, **Anil Bas**, and Banu Calis. Vehicle Route Optimization for Solid Waste Management: A Case Study of Maltepe, Istanbul, in *Proc International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, Pitesti, Romania, 2021, DOI: 10.1109/ECAI52376.2021.9515129.
- Mehmet Kaan Erol, Umut Arda Kapan, Muhammet Kerem Ozturk, Banu Calis, and **Anil Bas**. A Comparative Study of PCA and LBP for Face Recognition Under Illumination Variations, in *Proc IEEE Innovations in Intelligent Systems and Applications Conference (ASYU)*, Istanbul, Turkey, 2020, DOI: 10.1109/ASYU50717.2020.9259856.
- **Anil Bas**, Patrik Huber, William Smith, Muhammad Awais, and Josef Kittler. 3D Morphable Models as Spatial Transformer Networks, in *Proc International Conference on Computer Vision (ICCV) Workshop on Geometry Meets Deep Learning*, pp. 904–912, Venice, Italy, 2017, DOI: 10.1109/ICCVW.2017.110, URL: anilbas.github.io/publications/iccv2017/.
- **Anil Bas**, William Smith, Timo Bolkart, and Stefanie Wuhler. Fitting a 3D Morphable Model to Edges: A Comparison Between Hard and Soft Correspondences, in *Proc Asian Conference on Computer Vision (ACCV) Workshop on Facial Informatics*, pp. 377–391, Taipei, Taiwan, 2016, DOI: 10.1007/978-3-319-54427-4_28, URL: anilbas.github.io/publications/accv2016/.

Conference Presentations

- Imke van Heerden and **Anil Bas**. Towards Figurative Language Generation in Afrikaans, *North American Chapter of the Association for Computational Linguistics (NAACL) Workshop on Research in Computational Typology and Multilingual NLP*, Mexico City, Mexico, 2021, URL: sigtyp.github.io/workshops/2021/abstracts/27.pdf.
- Imke van Heerden and **Anil Bas**. On the Evaluation of Generated Poetry, *Empirical Methods in Natural Language Processing (EMNLP) Workshop on Evaluation and Comparison of NLP Systems*, Punta Cana, Dominican Republic, 2021.
- **Anil Bas** and William Smith. CCTV Revisited: Face Analysis Under Challenging Conditions, *PhD Research Showcase at YorkTalks, University of York*, York, UK, 2016, URL: anilbas.github.io/publications/yorktalks2016/.

Invited Talks

- Imke van Heerden, **Anil Bas**, and Cagdas Duman. AI Meets Literature: Challenges and Opportunities, *Literary Dialogues Lecture Series, Istanbul Bilgi University*, 2022, URL: bilgi.edu.tr/en/event/11029/literary-dialogues-ai-meets-literature/.
- **Anil Bas** and Harun Aksaya. Dijital Dünyanın Mimari Olmak [Becoming an Architect of the Digital World], *eTwinning Career Clubs (European Commission's eLearning Programme)*, 2021.

Technical Reports

- **Anil Bas**. BFX 2023 – Remarks and Sneak Peeks, Bournemouth University Research Blog, 2023, URL: blogs.bournemouth.ac.uk/research/2023/11/30/bfx-2023-remarks-and-sneak-peaks/.
- **Anil Bas**. Report on ICCV 2017, Newsletter of the British Machine Vision Association, 2017, URL: anilbas.github.io/blog/iccv2017/.