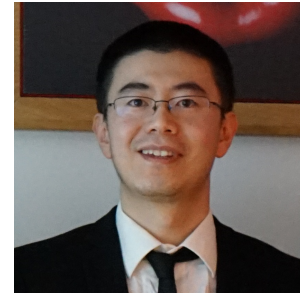


Guanqun CAO

	Born in Beijing, P.R. China (1986) Long-term EU resident (P-EU)
	Data Mining Engineer, Volvo Cars
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BRIEF INTRO

I am an automotive engineer with strong background in machine learning, pattern recognition and image processing. Meanwhile, I remain engaged in academic activities and collaborations.

SEVERAL HIGHLIGHTS

- PhD in Data Mining and Machine Learning leading to top publications, and hold privileged engineering degrees and several awards.
- My expertise lies in exploiting machine learning and pattern recognition techniques in numerous application, including computer vision and safety for autonomous driving system.
- Full-stack skills in data science from applied statistics, data mining to various computing infrastructure development.
- Adaptive to dynamic work place, a great team player, and excited to work in a diverse team.
- Beijing-born and EU-educated. Used to study or work for long term in 6 European countries.

EDUCATION

Tampere University, Tampere, Finland

PhD (with Distinction) in Computing Science

12/2011—04/2018

CIMET Master Erasmus Mundus, Univ. Jean Monnet, France; NTNU, Norway; Univ. of Granada, Spain

M.S. in Color Informatics and Media Technology

09/2008—09/2010

Huazhong University of Science and Technology, Wuhan, Hubei Province, P.R. China

B.Eng in Electronic & Information Engineering

09/2004—06/2008

University of Birmingham, Birmingham, UK

B.Eng(*Hons*) in Electronic & Computer Engineering

10/2007—06/2008

WORK EXPERIENCE

1. Co-founder at TinyML stealth startup. Jul. 2021 - Currently
2. Data Mining / Deep Learning Engineer at Volvo Cars. Apr. 2018 - Currently
 - Geo-spatial data analytics and traffic scenario analysis for autonomous driving validation & verification.
 - Developed perception algorithms, e.g. an end-to-end solution for camera-based object detection and tracking on NVidia Drive PX-2. The robust online multi-object tracking algorithm achieves the start-of-the-art results.
 - Initiated and maintained the computing and data storage facilities for the team.
 - First Engineer at Data Intelligence Team of Autonomous Driving section
 - Tech lead of 3 trainees/engineers
3. Visiting research fellow at Tampere University, Finland and Wuhan University, China. Jan. 2019 - Currently
4. Contract Researcher (Consultant) at Intel Finland Corp. Sept. 2017 - Apr. 2018
 - Machine learning in mobile imaging in the NSF CVDI programme together with Business Finland.
5. Contract Researcher (Consultant) at Tieto Oy, Sept. 2016 - Aug. 2017
 - Work on research project of 'Comparative Knowledge Discovery: Analyzing, Understanding and Visualizing Rankings' in the site of the NSF CVDI programme.
6. Visiting researcher to University of Louisiana at Lafayette and University of Virginia, April 2017.
 - Multi-facet object ranking.
7. Researcher at Tampere University of Technology, Jan. 2010 - Dec. 2017
 - researched and developed new feature descriptors for large scale scene recognition techniques collaborated with Alma Media
 - researched on image/object segmentation techniques
 - took part in MSR-Bing challenge 2013 and develop automation tools on the supercomputer for training machine learning models
 - researched on large scale learning algorithms in the cloud
 - supervised 1 master thesis worker on machine learning for color constancy with Intel
8. Research assistant at Laboratoire Hubert Curien, French National Center for Scientific Research (CNRS). 2009.7-2009.8
Blur identification, perceptual image quality assessment.

PUBLICATIONS

Google Scholar Link: <https://scholar.google.com/citations?hl=en&user=owGiCUkAAAAJ>

TALKS

- “Geo-spatial Data Mining Using **R!**”, Why R? 2020 Conference.
- “How will Big Data transform our life?”, to students of France Telecom, at New Factory Tampere, July, 2014

HONORS

1. Tampere University Graduation Award for PhD With Distinction (€1,500), 2020.
2. Travel Grant (€3000) for Excellent PhD Researchers in Guangdong Innovation Programme, Oct 2019
3. Best student paper award at IEEE IPTA 2016.
4. Member of the 2nd winning team in Microsoft Research-Bing challenge 2014
5. Erasmus Mundus Scholarship (€42,000 in total) funded by the European Union, Aug 2008 to Aug 2010
6. Technicolor award for the project contest winners in 2009 (€1,500 in total)
7. International Studentship, University of Birmingham, October 2007

SKILLS AND HOBBIES

Professional skills: Machine/Statistical/Deep Learning, Embedded & Cloud Computing, Multimedia Information Retrieval, Image Processing.

Computer skills: Python, Shell Scripting, Matlab, R, Latex, C/C++, GIMP, Linux

Device capability: Spectral photometer, spectral colorimeter, SMI high-frequency eyetracker

Language Skills: English (excellent), French (intermediate), Spanish (basic), Chinese (native).

Professional services: IEEE Member. Reviewers for IEEE Trans. on Cybernetics, IEEE Trans. on Vehicular Technology, Journal of Visual Communication and Image Understanding, International Conference on Image Processing 2018-2021. Member and Contributor at ML Commons.

Hobbies: Swimming, photography, archery, backpacking.