

INTRODUCTION

Dr. Parham Kebria is an accomplished research scientist and roboticist with 5+ years of experience developing machine learning, robotics, and data science solutions to address real-world challenges. He holds a Ph.D. in Information Technology from Deakin University, where he was awarded the prestigious Alfred Deakin Postdoctoral Research Fellowship, focusing on autonomous systems, medical robotics, and health data analytics. He has led and contributed to several high-impact, interdisciplinary projects supported by NASA, NSF, U.S. Department of Transportation, Australian Department of Defense, Australian Bureau of Statistics (ABS), and Austin Health. Dr. Kebria has a strong track record of technical leadership, cross-functional collaboration, and innovative solutions.

EDUCATION

Ph.D. in Information Technology, Deakin University	2016 – 2020
M.Sc. in Electrical Engineering, Amirkabir University of Technology (Tehran Polytechnique)	2012 – 2014
B.Sc. in Electrical Engineering, Imam Khomeini International University	2007 – 2011

SKILLS

Programming	Python, C++, C#, SQL, R, MATLAB
Workflow Management	Git, LaTeX, Linux, MS Office, Tableau
AI/ML	PyTorch, TensorFlow, Keras, OpenCV, Scikit Learn, LLMs, Generative AI, GitHub Copilot
Data Science Tools	Numpy, Pandas, Matplotlib, SciPy, Seaborn
Cloud/Mobile Computing	AWS, Docker
Project Management	PM-Partners Certificate

EXPERIENCE

North Carolina A&T State University	2024.11 – present
<i>Visiting Research Scholar – Center of Excellence for Autonomous Air Mobility</i>	
• Lead the development of data-driven algorithms for autonomous air-mobility systems, enhancing perception and control.	
• Partnered with NASA, NSF, and DOT on multi-million-dollar applied research programs in AI-driven transportation.	
• Generalizability assessment of deep data-driven models under uncertainty, adversarial, and out-of-distribution conditions.	
• Development of visual-only localization and navigation frameworks for autonomous vehicles under extreme conditions.	
The University of Queensland	2024.02 – 2025.11
<i>Senior Data Scientist – ATLAS, Australian Indigenous Health Network</i>	
• Led the development of data infrastructure and analytics products for the ATLAS Indigenous Primary Care Surveillance Network.	
• Championed ethical data practices and inclusive analytics to support Aboriginal and Torres Strait Islander communities.	
• Directed a data science team to deliver actionable insights for evidence-based healthcare and policy decisions.	
• Partnered with community leaders, government, and industry to ensure culturally respectful, impactful data solutions.	
• Fostered a collaborative, innovation-driven environment where ethical tech drives positive change for underserved communities.	
Deakin University Australian Department of Defense	2019.08 – 2023.06
<i>Research Scientist – AI & Autonomous Systems</i>	
• Led the AI and robotics team for autonomous military trucks , integrating vision-based ML, real-time control, and V2V networking.	
• Delivered a fully operational autonomous truck convoy platform, showcased nationally , and awarded the Essington Lewis Award in the Support and Service for technological innovation.	
Deakin University	2020.03 – 2022.03
<i>Alfred Deakin Postdoctoral Research Fellow</i>	
• Designed, developed, and deployed full-stack of a haptically-enabled telerobotic platform for ultrasound scanning, combining advanced control strategies, hardware, and software to enable remote operation with tactile feedback.	
• Collaborated with leading healthcare institutions, including Austin Health and Epworth Health, to integrate the platform into real-world clinical environments, bridging the gap between cutting-edge technology and practical healthcare applications.	
• The technology received official ethical approval for clinical trials at Austin Hospital, Melbourne, Australia, marking a world-first achievement in the use of haptically-enabled telemedicine for ultrasound scanning in clinical settings. (Media Release)	
• The successful clinical trial approval has garnered national attention, and the technology is broadcast by 9NEWS Australia, highlighting its transformative potential in the field of medical diagnostics and remote healthcare.	

PUBLICATIONS

Please see my [Google Scholar profile](#) for the complete list of my publications

- Highly cited paper on “[Imitation Learning CNN-based Autonomous Driving](#)”, ESI index.
- Highly visited paper on “[Imitation Learning Advancements and Challenges](#)”, IEEE T-Cybernetics.

🎙 INVITED TALKS

- Guest lecturer on “Deep Learning and Image Classification”, NATO Science for Peace and Security Program, 2025.
- Invited speaker on “Deep Learning and Control in Autonomous Systems”, IEEE SMC Summer School, 2024.
- Invited speaker on “Deep Learning and Control in Autonomous Systems”, IEEE SMC Summer School, 2023.
- Invited oral presentation on “Robust Teleoperation” at IEEE ICRA, IEEE Robotics and Automation Society, London, UK, 2023.
- Invited speaker on “Human-Robot Collaboration for Reducing Work-Related Injuries”, WorkSafe Victoria, Australia, 2023.

💲 RESEARCH GRANTS

SocAI; Socially Intelligent Civic Services

NSF, Science and Technology Centers – contributed

- USD \$3,073,452.00 2026–2031

Center of Excellence for Advanced Air Mobility and Unmanned Aircraft Systems

NC-DoT – contributed

- USD \$2.0M 2025–2027

Autonomous Leader-Follower

Department of Defence, Australia – CO-PI

- AUD \$269,300.00 2022–2023
- AUD \$316,316.00 2021–2022

Predicting Lapses in Pilot Alertness for Increasing Integration of Autonomous Systems in Cockpits

Department of Jobs, Precincts, and Regions, Australia – CO-PI

- AUD \$15,000.00 2021–2022

Alfred Deakin Postdoctoral Research Fellowship

Deakin University – Winner

- AUD \$30,000.00 2020–2022

👤 TEACHING EXPERIENCE

Guest lecturer – Deep Learning for Disaster Management

NATO Science for Peace and Security Program, University of Central Florida, Orlando, USA

- Deliver lectures on image classification, CNN foundations, architecture, and training strategies.
- Present an end-to-end deep learning workflow with practical demonstrations and discussions.

Sessional lecturer – Entrepreneurship in Engineering

School of Engineering, Deakin University, Melbourne, Australia

- Delivered lectures and assessments on innovation, commercialization, and startup development in engineering.
- Mentored students on translating engineering concepts into real-world entrepreneurial ventures.

Teaching Assistant – Advanced Manufacturing and Mechatronics

School of Engineering, RMIT University, Melbourne, Australia

- Developed course materials and team-based projects on the design and construction of a “robocar”.
- Guided students in applying robotic design, control, and integration principles through hands-on learning.

👤 PROFESSIONAL ACTIVITIES

- IEEE SMC Special Session on Foundation Models and Agentic AI for Systems Engineering and Intelligent Systems SMC 2026
- SMC representative for the IEEE Transactions on Big Data (TBD) steering committee 2026 – 2027
- Adjunct Research Fellow, Swinburne University of Technology since 2025
- IEEE SMC Special Session on Securing Trust and Resilience in AI-Driven Autonomous Systems SMC 2025
- IEEE Senior Member, CS, RAS, SMC, and Young Professionals Societies since 2025
- Deakin University Human Ethics Advisor and Reviewer 2020 – 2023
- Vice President IEEE Student Branch of Deakin University 2017 – 2019
- Reviewer and Associate Editor of several journals and conferences, including *IEEE Trans. on Cybernetics, Neural Networks and Learning Systems, Robotics and Automation Letters (RA-L), ICRA, CASE, SMC, Robotics and Autonomous Systems Journal, Aerospace Science and Technology, ACM Computing Surveys, Robotics and Intelligent Systems*.

🏆 AWARDS AND HONORS

- Honorary Research Fellow with Swinburne University of Technology, Melbourne, Australia, 2025.
- Highly Appreciated Collaborative Researcher, IISRI, Deakin University, Australia, 2022.
- [Essington Lewis Award 2021 \(support/services\)](#), Australian Department of Defence, Oct 2021.
- [Alfred Deakin Postdoctoral Research Fellowship](#), Deakin University, 2020.
- Nominated for Alfred Deakin Thesis Medal, Deakin University, 2020.
- Student Travel Grant for the 15th IEEE International Conference on Automation Science and Engineering (CASE), 2019.
- Nominated for Best Student Paper, the 14th IEEE International Conference on Automation Science and Engineering (CASE), 2018.
- International PhD Research Scholarship, Telstra Haptic Project, Deakin University, 2016-2019.
- Exceptionally Talented Student in Electrical Engineering, Amirkabir University of Technology (Tehran Polytechnique), 2014.

🏅 EXTRAS

Australian Bureau of Statistics (ABS), Department of Health

2023 – 2024

Data Scientist | Machine Learning Engineer

- Led ML/NLP initiatives analyzing 20 years of health literacy data, developing predictive models to uncover disparities.
- Engineered large-scale datasets from ABS, ensuring data quality while upholding ethical and transparent AI practices.

Institute for Physical Activities and Nutrition — Deakin University

2022 – 2023

Data Scientist | Machine Learning Engineer

- Developed and deployed a deep learning framework for action recognition and motor skills scoring for young children.
- Developed and deployed a full-stack data collection module, including hardware and software as a standalone product.
- Training and deploying the deep learning framework for online scoring as an integrated software on the mobile platform.
- Delivered a seamless end-to-end framework for practical deployment with a lightweight and user-friendly design.

Barwon Centre for Orthopaedic Research and Education (B-CORE)

2022 – 2023

Data Scientist | Machine Learning Engineer

- Analysis and studying the literacy of health of orthopedic patients during the last 20 years.
- Development and deployment of machine learning pipelines for classification of patients' data pre- and post-operation.

Human Ethics Advisor and Reviewer — Deakin University

2020 – 2023

- Reviewing ethics applications from the faculty of science and engineering at Deakin University.
- Providing feedback and advice to research teams on their ethical correspondence and applications.

🎵 PERSONAL ACTIVITIES

Out of the world of science and technology, I am a professional musician (world-class percussionist) and a former competitive athlete (gold medalist in basketball and silver medalist in swimming).

🔗 REFERENCES

Available on request.