Tiago Guiomar Ribeiro
Consulting, Advising, Leadership in AI & Animation

* Autonomous Digital Humans and Characters
* Human-Robot Interaction
* User Experience and Product Vision

* Metaverse-directed applications
* LLMs for Behaviour and Animation
* LLM adoption/integration, LLM-as-API
* LLM fine-tuning and local deployment

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As an **AI** and **autonomous animation** scientist and engineer, be it **CGI** or **Robotics**, I focus not only on adopting and inventing **state-of-the-art** and world-class solutions, technologies and methodologies, but also on aligning new and existing technology with the given technical **requirements**, and product / business **goals and strategy**, so that AI can be used to power products and a **User-Experience**-driven, **Cost-Effective** and **Revenue-Focused** manner. I can work as an employee or as an external consultant, tightly integrated into teams at an upper **senior**, to **principal** or **director** roles.

Experience

Principal Research Engineer
Soul Machines · Auckland, New Zealand
Apr 2023 – May 2024 · Fully remote
- Lead development of autonomous animation system
- Facilitate tech dev feedback to Product Strategy
- Pipeline and workflow to train, evaluate and integrate LLMs for behaviour and animation
- Lead the transfer of research into product
- Plus all from my previous position

AI Animation Scientist & Level II Senior Researcher
Soul Machines · Auckland, New Zealand
Jan 2020 – Mar 2023 · Fully remote
- Design and develop the skeletal animation system
- Autonomous gesturing, socio-emotional behaviours
- Work with artists for fail-safe natural animated motion
- Invent autonomous animation mechanisms
- Autonomous behaviour design and selection
- Expressive behaviour of emotion and personality
- Measure animate and interactive qualities

Data Scientist & Data Pipeline Engineer
kencko foods · Lisbon, Portugal
Jan 2019 – Nov 2019 · Partially remote
- ETL pipeline - Python, BigQuery, Shopify, Stripe
- Data-science - BigQuery SQL, DataStudio and Spreadsheets.

HRI Architecture Consultor
Högskolan Väst (University West) · Trollhättan, Sweden
September 2018 · Remote
- Consulting on HRI architecture for NAO and Pepper

Robot Animation & Unreal Engine Developer
Gagosian Gallery · Brooklyn & New York City, USA
Dec 2017 - Mar 2018 · Partially remote
Exhibition 'PLAY', by Urs Fischer and Madeline Hollander
- Robot Animation & tools (Maya, Houdini)
- Interactive behaviour simulation in Unreal Engine

Research Assistant & Technical Direction
GAIPS, INESC-ID · Lisbon and Oeiras, Portugal
Feb 2011 - Nov 2017
- Developed HRI platform for projects and robots
- Mentoring & Assistance to MSc and PhD students
EMOTE - Embodied Perceptive Tutors for Empathy-Based Learning
2012 – 2015 (EU FP7 Project)
- Architecture Design & Development
- Robot Behaviour Management & Animation System
LiREC - LIving with Robots and Embodied Companions
2011 – 2012 (EU FP7 Project)
- Robot Behaviour Design & Robot Animation System

Skills

Development
Python
C/C++
C#
Unity Game Engine
Unreal Game Engine
HTML/CSS

Artificial Intelligence
Computer Animation
Machine / Deep Leaning
Human-Robot Interaction
Autonomous Socially-Intelligent Agents
Large Language Models (LLMs)
Data Science / Analytics
Generative AI (General)

Production & Team Skills
Whiteboarding / Miro
Systems Architecture
Mentoring
Product Vision & Strategy
Product / Project Management
Public Presentation
Reporting / Papers / Patents writing

Science & IP

Patents
WO 2023/067531 A1	Virtual Avatar Animation
Pending	Skeletal animation in embodied agents
Pending	Continuous Expressive Behaviour in Embodied Agents

Publications
(Google Scholar h-index 17)
2020	Modelling Human Motion (book chap, Springer)
2020	Human-Robot Interaction (Springer)
2019	Autonomous Robot (Springer)
2014	Handbook of affective computing (chap, Oxford)
2014·2015·2023	Autonomous Agents Systems (AAMAS conf)
2017	Multimodal Interaction (ICMI conf)
2017	Advances in Artificial Intelligence (AAAI conf)
2017	Robotics: Science and Systems (RSS conf)
2017	Intelligent Interactive Digital Entert. (AIIDE conf)
2012·2013·2015·2016	ACM/IEEE Human-Robot Interaction (HRI conf)
2014·2016	Robot Human Interactive Comm. (RO-MAN conf)
2016	AAAI Spring Symposium Series
2015	Social Robotics (ICSR conf)
2011·2012·2013·2014	Intelligent Virtual Agents (IVA conf)
2014	Interaction Design & Children (IDC conf)
2014	AAAI Fall Symposium on AI-HRI
2013	SIGGRAPH (Poster, Student competition finalist)
2013	Games-Based Learning (ECGL conf)

Academic Duties
Conference org:
- HRI'15 (Pioneers), AI-HRI'15, IVA'22
Peer-reviewing:
- Springer (IJSR, ISR journals), IVA, HRI, RO-MAN, GENEA