



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 Consultant

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 Learning
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
Pending
Pending

Virtual Avatar Animation
Skeletal animation in embodied agents
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, GENE