

RENATO F. SALAS-MORENO, PhD

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OVERVIEW

Renato is an innovative leader with a unique talent to attract and inspire world-class team members towards solving challenging problems in real-time computer vision as the foundation for truly unique products.

He co-founded Surreal Vision Ltd (acquired by Facebook), a computer vision startup that instantly builds 3D environments for VR with RGB-D sensors. This was followed by Vtrus Inc, an indoor drone startup for autonomous inspection of industrial sites, leveraging a custom surround view visual-inertial sensor suite with optimized embedded algorithms on the Nvidia Jetson platform.

He has deep technical expertise on Simultaneous Localization and Mapping (SLAM), the vision to foresee disruptive technological waves and the courage to lead teams towards building cutting-edge products from the ground up. Furthermore, he maintains strong connections with the academic community and stays up-to-date with impactful research.

AWARDS

2015 MIT Innovator under 35. [Article link](#).

Innovate UK, Entertainment on the Move Innovation Contest 2014. Winner of a government grant to help bootstrap Surreal Vision Ltd.

MSc with Distinction. 2nd prize for best image processing MSc project "Real-time facial features detection and tracking".

EDUCATION

PhD in Robotic Vision. Imperial College London, United Kingdom. Oct 2010 - Sep 2014. Dense Semantic Simultaneous Localization and Mapping (SLAM) for robotic navigation. [Project Page](#).

MSc in Advanced Computing. University of Bristol, United Kingdom. Sep 2005 - Oct 2006. Computer Vision and Graphics studies.

BSc in Systems Engineering. National University of Engineering, Lima - Peru. Mar 1999 - Dec 2004. Core engineering and computer science degree.

PUBLICATIONS

ElasticFusion: Dense SLAM Without A Pose Graph. Thomas Whelan, Stefan Leutenegger, Renato Salas-Moreno, Ben Glocker and Andrew Davison. RSS 2015. [PDF](#), [Video](#).

Dense Semantic SLAM. Renato Salas-Moreno. PhD Thesis, Imperial College London, October 2014. [PDF](#).

Dense Planar SLAM. Renato Salas-Moreno, Ben Glocker, Paul Kelly and Andrew Davison. ISMAR 2014. [PDF](#), [Video](#).

SLAM++: Simultaneous Localisation and Mapping at the Level of Objects. Renato Salas-Moreno, Richard Newcombe, Hauke Strasdat, Paul Kelly and Andrew Davison. CVPR 2013. [PDF](#), [Video](#).

EMPLOYMENT

Boeing, Everett WA, USA. Chief AI Architect. Nov 2023 - Present. Technical leader for machine learning moonshots with application in cargo operations, autonomous flight and piloting safety.

Formavision Inc (Formerly Omnivor Inc), Seattle WA, USA. VP of Engineering. May 2021 - June 2023. Led a team that developed a real-time inference of 3D human body shape from a single camera using adversarial networks.

Vtrus Inc, Seattle WA, USA. CEO and Co-Founder. Feb 2017 - Apr 2021. Built the robotics startup from the ground up, producing an autonomous indoor drone and robotics perception platform. Designed the technical architecture, core multi-camera SLAM routines and fusion of IMU+GPS under the Extended Kalman Filter, multi-camera calibration and simulation environment. [Project Page](#)

Facebook - Oculus VR, Redmond WA, USA. Research Scientist. May 2015 - Jan 2017. Research and development of real-time indoor localization and mapping for virtual reality headsets.

Surreal Vision Ltd (acquired by Facebook), London, UK. CEO and Co-Founder. Nov 2013 - Apr 2015. Built the 3D mapping startup from the ground up together with a scientific team from Imperial College London.

AMD, Austin TX, USA. Software Engineer Internship. Jun 2011 - Oct 2011. Characterisation of workloads for unified CPU/GPU architectures.

Activision - Bizarre Creations Studio, Liverpool, UK. Jun 2008 - Oct 2010. Software Engineer. Development of 3D Modelling and Animation tools for video games.

ENTREPRENEURSHIP

Investor at the SeaChange angel group in Seattle WA and providing strategic guidance to Pacific Northwest startups.

Experienced securing government grants and raising VC funds with a successful exit to Facebook.

IN THE PRESS

Facebook buys British virtual reality start-up Surreal Vision. The Telegraph, 28 May 2015. [Article link](#).

Researchers use Oculus Rift and Augmented Reality to put Facebook on your wall. Gizmodo, 17 September 2014. [Article link](#).

The Oculus Rift can now change your carpeting. Fast Company, 16 September 2014. [Article link](#).

Computers are gaining the ability to remember what things look like. Digital Trends, 6 June 2013. [Article link](#).

Remembering objects lets computers learn like a child. New Scientist, issue 2920, 5 June 2013. [Article link](#).

LANGUAGES

English: Proficient. Spanish: Native language.

CITIZENSHIP

US Citizen

OTHER INTERESTS

Passionate aviator since childhood. [Project Page](#).

Hold a Private Pilot license with Instrument Rating, high performance endorsement for the Cirrus SR22 and seaplane rating for the Icon A5 amphibious plane.

Member of the Civil Air Patrol - Seattle Squadron and the Experimental Aircraft Association (EAA).

Actively builds a Velocity Aircraft kit in his hangar.

Frequent visitor at Aerospace expos such as Oshkosh and SunNFun.