Alisson Sol - Physicist, Software Engineer, General Manager

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Work Experience

Capital One

- **VP of Software Engineering** (December/2023 – Present)
  - Recruited to manage the Endpoints & Automation Engineering team, in charge of computers, virtual desktops, and mobile devices. Providing strategic guidance, architectural expertise, and program support to optimize processes, improve efficiency, and enhance key metrics in cybersecurity, privacy, accessibility, capacity, and edge AI deployment and compliance. Managed automation of the endpoint application control with allow list enforcement, reducing median time to approve new applications from weeks to less than 6 hours.

Google

- **Senior Engineering Manager** (May 2022 – December 2023)
  - Worked on Security Defense Platforms projects of the Privacy, Safety & Security group within Google Core Systems, managing Enterprise Protection Platform and Security Endpoint Agents teams in NYC, US, and Zurich, Switzerland. Managed the deployment of endpoint applications and privileged access control for user-facing endpoints.

Microsoft Corporation

- **Group Engineering Manager for M365 IC3** (January/2022 – April/2022)
  - Worked on Engineering Systems strategy, tools improvements, and process optimization for the Microsoft Teams backend.
- **Group Engineering Manager for AI Frameworks** (November/2020 – January/2022)
  - Management of ONNX runtime training, directing the compute acceleration, white-glove (model integration), and infrastructure for AI model training (Python packages builds for https://github.com/pytorch/ort and security and compliance).
- **Group Engineering Manager for M365 IC3** (September/2019 – October/2020)
  - Recruited back to Microsoft to manage USA and Estonia teams for the Intelligent Conversation and Communication Cloud (IC3) real-time backend for Microsoft Teams, Skype, and Skype for Business. Improved DevOps team velocity for services in audio conferencing, live events, and applications (call recording, live captions, transcription, voicemail, and others). I established the calling, meetings, and PSTN data team and managed migrating services to Azure and **scaling up by 100x** during remote work and education expansion due to the 2020 pandemic.

Amazon.com

- **Senior Software Development Manager for Amazon WorkSpaces** (February/2019 – August/2019)
  - Manager of infrastructure teams for WorkSpaces, a secure cloud desktop service from AWS that customers use to provision Windows or Linux desktops in just a few minutes and quickly scale to provide thousands of desktops to workers across the globe. Drove up manager satisfaction, job satisfaction, and teammates satisfaction. Used working backwards approach to align teams toward solving long-standing DevOps and customer problems, ranging from certificate key rotation to cost drill-down.
- **Senior Software Development Manager for Dropship** (July/2017 – January/2019)
  - I was recruited by a previous manager to join Amazon and assigned to manage online services for real-time inventory updates, order processing, and transportation integrations for direct fulfillment. Connected strategic annual business goals to quarterly and sprint plans. Through agile planning, achieved a reduction of technical debt while implementing new functionality, like adding support for the first new country stack in 9 years (India), public APIs, and new carrier integration. Software development teams moved data storage out of Oracle, while turnover went from 50% to 5%.
  - Managed business intelligence team in charge of metrics and reports optimizing development and operations for multibillion-dollar business shipping products directly from thousands of manufacturers and vendors to millions of customers. Maintained data quality during the move of data out of Oracle to multiple data stores.

Microsoft Corporation (Previous Tenure)

- 4 Gold Star Awards, 7 Microsoft Research Technology Transfer Awards, 17 patent applications (10 granted)
- **Architect** and **Group Engineering Manager (AI+R Core)** (May/2013 – June/2017)
  - Engineering Manager for SPACE (Security, Privacy, Accessibility, and Capacity Engineering) team, supporting the AI Core group. Managing a team of engineers and penetration testers supporting horizontal and vertical applications like Bing, MSN, Cortana, and APIs. Development of request management, financial cost, and capacity modeling tools for millions of machines in multiple data centers.
  - Engineering Manager for AI Core Spartans group, a group of software engineers and data scientists working on special projects in the Artificial Intelligence area, also expanded as an onboarding team for the organization.

- **Engineering Lead for the Kinect for Windows team** (November/2011 – April/2013)
  - Founding team member, recruited and managed the Computer Vision team for the [Kinect for Windows SDK](#), which shipped in 32 countries with over 500K downloads. Implemented a new machine learning module for [gesture recognition](#).
  - For Kinect for Windows v1.0, released on February 1st, 2012, participated in the position description and hiring of members for the development and test disciplines of the computer vision team. Aligned technology transfer with Xbox and Microsoft Research, transitioning the latest machine learning real-time processing results into production-quality code.
  - For Kinect for Windows v1.5, released on May 21st, 2012, managed verification and validation of skeletal tracking pipeline through internal toolset and migration and release of "Kinect Studio".
  - For Kinect for Windows v1.7, released on March 18th, 2013, managed the development of hand grip/release recognizer and tech transfer of [KinectFusion](#). Developed with interns the samples Kinect Bridge with OpenCV basics and Kinect Bridge with MATLAB basics.
  - Managed team starting the development of NUI (Natural User Interface) interactions for Xbox One.
- **Knowledge Engineer for the Engineering Excellence team** (August/2010 to October/2011)
  - Rotational role picked among experienced software engineers in the company to work on documenting and spreading best practices in the development discipline.
  - Instructor for training sessions presented to Microsoft engineers, including the "Agile development lab", "Development at Microsoft for SDE I/II/Senior", "Engineering at Microsoft", and JavaScript classes.
  - Technical owner of internal training on Azure, SQL Azure, Html5, jQuery, and Silverlight.
- **Development Manager for Microsoft Research Cambridge Innovation Development** (February/2007 – July/2010)
  - Hiring and management responsibilities and commitment to fostering a results-driven environment characterized by curiosity, deep reflection, mutual challenge, and learning from others within and outside the team.
  - Quick evaluation of research results and incubation of those for transfer to product teams. Incubations include:
    - Gesture Mouse Experience Prototype (Microsoft [Touch Mouse](#))
    - Microsoft Research AutoCollage Touch 2009 application: First Microsoft Research project integrated with CEIP (Customer Experience Improvement Program), translated to 15 languages at initial release time.
    - Microsoft Research [AutoCollage 2008](#): First Microsoft Research project integrated with [Windows Update](#).
    - Worked with an external partner for the server-side development of a service to allow communication between a new device ([Wayve](#)) and mobile phone, using SMS and MMS messages.
    - Worked on the user interface components for trials of a new secure peer-to-peer technology ([Nimbus](#)).
    - Leader of a small team that converted an IPTV technology implementation from C# to C++ ([Pastry](#)).
- **Individual Contributor and Development Lead for Microsoft teams in Redmond-WA** (March/2000 – January/2007)
  - Development Lead for the Add-In for Excel, Reporting Wizard, and Samples subsystems for Microsoft Office [PerformancePoint Server 2007](#), a Business Intelligence solution allowing full performance management and scalable to entire corporations (with modules for forecast, monitoring, and business analytics). Defined an easily configurable data center deployment model, presented during the event "[The Rise and Rise of the Declarative Datacentre](#)".
  - Development lead for the user interface subsystem of the Microsoft Office [Information Bridge Framework](#) 1.0, including the task pane rendering inside Office applications, driven by backend web services. Leader for the initial tools effort for IBF v1.+, jumpstarting the offshore development by training the development team in Hyderabad, India.
  - Development lead for the Workflow user interface (in ASP.NET) of the [Business Framework](#). I convinced upper management of the need to rewrite the entire subsystem due to scalability and usability issues. With better object-oriented architecture, that effort reduced the total lines of code by a factor of 10 (from around 30K LOC to ~3K LOC), with improved usability and accessibility.
  - Leading developer of the BizTalk [Orchestration Designer](#) for BizTalk 2002.

Main Previous Work Experience

- Co-founder of 3 startup companies providing software, hardware, and IT consulting.
- Co-author of several patent applications (10 USA patents granted).

Education

2009: General Management Certificate from the Judge Business School, Cambridge University, UK
1997: Qualified for a doctoral degree at UFMG – Proposed work: [metamodel for distributed multimedia processing](#)
1993: M. Sc. Degree in Computer Science at UFMG: [PhotoPix](#): Framework for Digital Image Processing Systems
1990: Post Graduation studies in Electrical Engineering (Microelectronics) at USP
1988: B. Sc. Degree in Physics at UFMG (Federal University of Minas Gerais)