MONICA SPISAR, PhD

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LEADERSHIP + MANAGEMENT EXPERIENCE

University of Oxford Portfolio Lead / Scientific Liaison 2019.02 - 2021.07

Built $1.2MM longevity bioscience portfolio: scouted, managed projects. Worked with PIs to develop >50 longevity-focused research proposals in under 6 months. Managed a complex mix of advisory board objectives. Drafted original research proposals for sister portfolios under our funding umbrella. Details: monicaspisar.com/posts/hedging-bets-longevity

Mineral Deposit Research Unit COO 2013.10 - 2015.10

Led operations, finance (budget O($MM)). With the Director, co-led strategies for new research initiatives, sponsorships, fundraising. Board liaison. Planned, executed a unit reorganization. Designed training programs in collaboration with MDRU members and faculty. Routinely resolved friction points between industry expectations and institutional inertia. Redesigned MDRU's resource and archival information systems. Revamped operations to support a distributed team.

University of British Columbia Program Manager & Industry Grants Officer 2011.04 - 2013.06

Delivered a translational training program. Coincidentally contributed to the founding of a 3D tissue printing startup, now a thriving company - Aspect Biosystems. Negotiated and managed 200+ industry-academia agreements annually.

Panne Rizo CEO 2004.10 - 2011.01

Acquired a micro-managed business and transformed it into a local retail/wholesale enterprise. Earned coveted Whole Foods supplier slot. Built operational infrastructure and implemented systems to support operational transparency.

Xoran Technologies Early stage startup team member 2000.01 - 2000.11

Startup to commercialize a small footprint CT scanner. On early team, to seed SBIR award ($250k/$1.5M). Contributed to initial investor pitches. Led market research to identify a tractable go-to-market strategy. Still a thriving company.

TECHNICAL IC EXPERIENCE

Recurse Center Software craftsmanship & upskilling 2021.09 - 2021.12 & 2024.05 - 2024.08

Dramatically improved my software engineering skills in both batches at `*the writing residency for programmers*`.
2024: Foundations for machine learning, AI safety (mechanistic interpretability), memory-safe languages (Rust).
2021: Computer science fundamentals. Focused on backend engineering (mainly in Python, Go) and code craftsmanship.

Lantern Software Engineer, Censorship circumvention systems 2022.03 - 2024.05

Rebuilt data pipeline, reduced data costs 50%. Data analysis/viz to secure O($MM) funding & accelerate service recovery O(10x). Go, Python, Rust, GCP, Docker, Terraform, Open Telemetry, Superset, Big Query, Honeycomb, Datadog, Tailscale.

Kardium Research Engineer (Employee #16), Medical devices 2008.11 - 2011.01

Led device performance characterization (computer simulations, lab), preclinical trial design, and initial clinical evaluation for a class II device. Led deployment imaging design for a class III device. Patents: 8888791, 9700363

Biomedical Imaging Lab, Sorbonne University Research Scientist (Postdoc) 2003.09 - 2004.09

Designed and built a microfluidics-based vascular flow model system for high resolution ultrasound imaging.

EDUCATION + RESEARCH TRAINING

University of Michigan PhD, Biomedical Engineering (Medical Imaging)

Thesis: Optoacoustic detector arrays for medical imaging applications. Publications: Google Scholar: Monica Spisar
Designed, built, tested a laser-based ultrasound imaging system with novel detection technology. Met clinical requirements, 10x sensitivity increase. Signal capture, image processing, image reconstruction, systems analysis.

University of Toronto BSc, Physics

SOFTWARE SKILLS + PROJECTS + NON-ACADEMIC WRITING

Python, Go, Rust. NumPy, sklearn, PyTorch. MATLAB. SQL, PostgreSQL. Open Telemetry, Honeycomb, Datadog. Grafana, Prometheus. BigQuery. Rockset. Docker. Terraform. Tailscale. GCP, AWS. Git. Bash. Wireguard. Javascript, HTML, CSS.

Projects (GitHub): micrograd-python, ray tracers (Rust, Python), agentrix, multisource downloader

Posts (monicaspisar.com): Designing neural networks; Building a longevity bioscience portfolio; AI in medical imaging