Ilias Sioutis

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Professional summary

Senior **Software Project Manager and Solutions Architect** delivering **AI-powered digital health platforms** in regulated environments. Led **end-to-end iOS/Android healthcare product delivery** (requirements to architecture to implementation to validation to privacy governance to release), with hands-on ownership of **Bluetooth medical device integrations**, **on-device AI**, and **secure mobile/cloud architectures**.

Specialized in **evidence-driven delivery**: led a **hospital-supervised clinical validation program** at **Athens Hospital (Hygeia Group)** (**Feb 6 - Mar 6, 2025; 27 participants; 6 Bluetooth devices; repeatable protocols**) designed explicitly for **Apple App Store Review Guideline 1.4.1 (Safety - Physical Harm)** evidence expectations. Authored a **~250-page validation dossier**, built **reproducible Python statistical pipelines** (ICC, Bland-Altman, MAD, Agreement %), and coordinated clinical oversight and verification workflows to confirm **measurement performance** and **device-to-app data integrity** under supervision.

Strong technical foundation across **secure data handling (GDPR)**, **AES-256 application-layer encryption**, **TLS**, **RBAC**, and **Azure integration platforms**, known for bridging **technical, clinical, and regulatory stakeholders** to deliver compliant, production-ready outcomes.

Core strengths

- AI-powered healthcare & digital health platforms
- Regulated environments (GDPR, privacy, security, validation)
- Clinical validation & evidence generation
- End-to-end SDLC & cross-functional delivery
- Cloud & data integration architectures (Azure)

Professional experience

Telematic Medical Applications — Software Project Manager

Oct 2024 - Present | Athens, Greece (On-site)

- Led end-to-end delivery of **two mobile healthcare applications (iOS + Android)** integrating **on-device AI** (rPPG/contactless vitals, stress assessment) and a secure cloud-backed ecosystem.
- Managed a cross-functional delivery model (outsourced front-end/back-end teams), driving scope, plan, execution, quality gates, and release readiness across the full SDLC.
- Owned **Bluetooth medical device integration** end-to-end (**6 devices**: BP monitor, pulse oximeter, thermometer, scale, ECG/HR, multiparameter biomarker device), ensuring accurate data capture and device/app interoperability.

- Led a **hospital-supervised clinical validation program** and produced a **~250-page clinical evidence dossier** designed explicitly for **Apple App Store Review Guideline 1.4.1 (Safety - Physical Harm)**, supported by reproducible **Python** outputs (ICC, Bland-Altman bias + 95% LOA, MAD, Agreement %) and traceable **Excel to Python** datasets.
- Verified **end-to-end Bluetooth-to-app data integrity** under supervised workflows (device display = app display), with **daily Excel logging** and cross-verification/archival with hospital staff; **no observed missing values or corruption** across tested devices.
- Authored and maintained platform-specific **Terms of Use and Privacy Policies** (iOS + Android), defining data handling, retention, user rights, and governance for regulated digital health.
- Implemented privacy/security controls aligned with **GDPR**: EU/EEA hosting (Hetzner, Germany) under DPA, **TLS in transit**, **application-layer AES-256 at rest**, and RBAC/need-to-know access.
- Delivered supporting services: teleconsultations + chat, secure e-commerce flows for device/doctor-session purchases, and a ticketing/support workflow integrated with the product ecosystem.

Navarino — IT Service Analyst

Apr 2024 - Sep 2024 | Athens, Greece (On-site)

- Installed, configured, and supported enterprise **Windows Server 2022** environments (AD, DNS, DHCP, GPO, DFS/NFS, FTP/SFTP).
- Managed and troubleshot **virtual Windows and Linux servers**, performing patching, backups, recovery, and performance monitoring.
- Administered **enterprise networking infrastructure**, including firewalls, Layer 2/3 switches, VLANs, VPN/remote access, and wireless networks.
- Performed **network traffic analysis** and incident troubleshooting across TCP/IP, DNS, SMTP, SNMP, and NTP services.
- Maintained structured **infrastructure and network documentation** using Visio and operational runbooks.
- Developed **Python scripts feeding Power BI dashboards** to report on network performance, utilization, and operational health.
- Supported secure data handling through **NTFS/share permissions**, access controls, and monitored file services.

IntelliSolutions — Project Manager

Dec 2023 - Apr 2024 | Athens, Greece (Hybrid)

- Coordinated end-to-end delivery of digital transformation projects across **business analysis to design to front-/back-end development to internal testing to SIT/UAT to pre-production deployment to post-production monitoring**.
- Facilitated client and internal stakeholder workshops (product, technical, BA, QA, business development) to capture requirements and translate them into actionable delivery plans.
- Built and maintained integrated project plans (scope, milestones, resourcing, dependencies), aligning delivery with client priorities and internal capacity constraints.
- Supported solution shaping by contributing to **workflow design** and **systems integration** approaches aligned to customer industry needs and technical constraints.
- Managed risks, issues, and change requests; ensured clear documentation, communication, and decision tracking throughout the lifecycle.

- Ensured delivery quality through coordination of testing activities, defect triage, release readiness checks, and go-live coordination.
- Reviewed customer feedback and drove action plans to improve outcomes and stakeholder satisfaction.
- Contributed to **upsell / expansion opportunities** by partnering with internal teams to propose value-added enhancements and follow-on work.

Freelance — Business Analyst / Solutions Architect / Project Coordinator

Jul 2023 - Nov 2023 | Remote

- Defined project scope, objectives, and success criteria with stakeholders; translated business needs into clear deliverables and phased plans.
- Led requirements elicitation and analysis with clients and third-party vendors; facilitated alignment on processes, responsibilities, and acceptance criteria.
- Advised on digital transformation decisions, including **systems integration options** and end-to-end workflow design aligned to constraints (time, cost, capabilities).
- Developed project plans (timeline, milestones, dependencies), allocated resources within budget constraints, and tracked execution to delivery.
- Produced periodic status reporting for stakeholders, ensuring transparency on progress, risks, and decisions.
- Owned risk and change management: identified risks early, built mitigations/contingencies, and controlled scope changes through documented approvals.
- Coordinated testing and quality assurance activities to ensure outputs met functional requirements and quality expectations.
- Conducted post-project evaluations and documented lessons learned to improve delivery effectiveness and client outcomes.

Swift Marine (A Horizon Group Company) — Senior Azure Integration Engineer

Jul 2019 - Apr 2023 | Athens, Greece (Hybrid)

- Led client-facing delivery of complex **enterprise integration projects**, acting as the primary liaison between business stakeholders, product owners, and engineering teams.
- Drove requirements elicitation through structured workshops; translated business processes into **functional and non-functional specifications** with clear acceptance criteria.
- Performed gap analysis on legacy systems and workflows; proposed realistic technical and process solutions within agreed scope, budget, and timelines.
- Designed and implemented **Azure-based integration architectures**, including RESTful APIs, Azure Functions (C#), Durable Functions, Logic Apps, Service Bus, and secure storage services.
- Built and supported data and analytics solutions using **Azure SQL and Power BI**, with **exposure to Azure Data Factory, Synapse Analytics, and Databricks** in delivery contexts.
- Coordinated internal teams and third-party vendors to ensure seamless execution, change control, and delivery against project plans.
- Owned end-to-end delivery governance: progress tracking, risk management, change management, and regular stakeholder reporting.
- Produced comprehensive technical and business documentation, including **BRDs, integration specifications, process flows, and user guides**.

- Supported and participated in **System Integration Testing (SIT)** and **User Acceptance Testing (UAT)**, ensuring solutions met business and technical expectations prior to production rollout.
- Researched industry best practices and emerging technologies to drive **cost optimization, scalability, and operational efficiency**.
- Established delivery standards and reusable patterns that reduced support overhead and improved long-term maintainability.

EY — Senior Consultant, Financial Services & Big Data Engineering

Dec 2016 - Jul 2019 | Athens, Greece (Hybrid)

Senior Consultant - Financial Services
Aug 2018 - Jul 2019

- Worked as part of cross-functional **scrum teams** delivering data-driven and regulatory-focused solutions for financial services clients.
- Led **requirements workshops** with business stakeholders and subject matter experts; translated business objectives into structured functional and non-functional specifications.
- Designed integration solutions bridging **business requirements and technical implementation**, ensuring appropriate granularity and traceability.
- Conducted **User Acceptance Testing (UAT)** for delivered features; logged defects, supported resolution, and validated production readiness.
- Validated **credit risk models** (PD, LGD) under Basel regulatory frameworks using **R scripting**.
- Validated pricing models for complex financial instruments, including **oil-linked derivatives, swaps, and options**, implementing benchmarking, stress testing, and lifecycle-event analyses in **Python**.
- Designed and implemented quantitative models for **supply chain network optimization**, including neural networks and metaheuristic algorithms (genetic algorithms, simulated annealing, tabu search) using **C++**.

Senior Consultant - Big Data Engineering
May 2018 - Jul 2018

- Acquired hands-on experience with **Hadoop ecosystems** (Hortonworks HDP 2.6.4.0), including Hive, Pig, Oozie, Atlas, Ranger, Kerberos, and HDFS.
- Designed and implemented **data models** and ingestion workflows using **Apache NiFi** and **StreamSets**.
- Worked with **HiveQL** for large-scale data querying and transformation.
- Supported deployment, configuration, and administration of Hadoop-based platforms.
- Investigated and resolved **data quality issues** across distributed data pipelines.
- Developed analytical dashboards and reporting solutions using **QlikView**.

Senior Advisor - Financial Services & Risk Management
Dec 2016 - Apr 2018

- Authored extensive **model validation documentation** for FX, interest rate, commodity, and equity derivatives, including European, Asian, basket, quanto, and digital options.
- Validated pricing frameworks such as **Black-Scholes analytic, Monte Carlo, local volatility, and local correlation models**, implementing comprehensive test suites in **Python**.
- Conducted **benchmarking, backtesting, stress testing, convergence analysis, and limiting-case tests** for model governance and regulatory compliance.

- Validated **SIMM methodology** using backtesting and benchmarking implemented in **R**.
- Assessed market risk capital calculations under **FRTB** using in-house VBA frameworks.
- Performed valuations of **Credit Default Swaps (CDS)** and CDS indices using **Murex**.
- Produced IFRS 9 impairment documentation, developing expected credit loss (ECL) models and supporting regulatory reporting.

Sociomantic Labs — Software Developer

Nov 2015 - May 2016 | Berlin, Germany (On-site)

- Worked as a back-end developer in **R&D**, contributing to the design and implementation of data-driven software systems.
- Developed performance-critical components using the **D programming language**, focusing on robustness, scalability, and maintainability.
- Collaborated closely with research and engineering teams on experimental and production-grade systems.
- Participated in the full development lifecycle, including design, implementation, testing, and iterative improvement of backend services.

University College London (UCL) — MPhil Researcher, Computer Science

Jan 2013 - Sep 2015 | London, UK (On-site)

- Conducted advanced research in **medical imaging and computer vision**, focusing on non-rigid 3D surface registration for image-guided interventions.
- Designed and implemented multiple **machine learning-based registration algorithms** (Gaussian Mixture Models, Kernel Correlation, Expectation-Maximization, Thin-Plate Splines) in **C++**.
- Developed extensive **synthetic dataset generators** to simulate controlled deformations, noise, occlusions, and partial overlap for algorithm evaluation.
- Built rigorous **automated validation frameworks** to quantify algorithm accuracy, robustness, and applicability using target registration error (TRE) and statistical analysis.
- Implemented supporting visualization and tooling using **Qt, VTK, OpenCV, PCL**, and related C++ libraries.
- Produced a structured, evidence-heavy MPhil thesis demonstrating reproducible experimentation, benchmarking, and technical rigor.
- Contributed to augmented reality-oriented software prototypes related to surgical guidance.

MiuraConsulting — Contract Software Developer

Mar 2012 - Sep 2015 | London, UK (On-site)

- Developed **financial technology applications in C++ and Qt** for the investment and asset management industry.
- Designed and implemented an **automated regulatory reporting platform** producing XML submissions for ESMA (AIFMD), FCA (AIF001/AIF002), Irish and US regulatory frameworks.
- Built configurable reporting engines driven by **user-defined configuration files** and dynamic SQL execution on SQLite databases populated from external data sources.
- Developed a **risk, compliance, and regulatory monitoring dashboard**, delivering real-time, color-coded control results based on scheduled analytical rules.

- Implemented a **TCP client-server architecture** enabling automated, scheduled data transfer between distributed systems, including remote Excel/Bloomberg-driven data ingestion.
- Built **multi-threaded analytical GUI applications** providing drill-down views of market risk metrics (e.g., VAR, DV01, CS01, FX delta, commodity delta, vega exposure).
- Delivered robust, performance-sensitive software with strong emphasis on correctness, reliability, and maintainability in regulated financial environments.

Early Career — Research, Engineering & Analytics

2000 - 2011 | Europe & USA

Postdoctoral Researcher — University of Munich (Germany)

- Led multidisciplinary research in computational chemistry and spectroscopy.
- Developed **C++ simulation software** for modeling complex physico-chemical systems, contributing to peer-reviewed publications.
- Presented research outcomes at international scientific institutes and conferences.

Graduate Research Assistant / Teaching Assistant — The Ohio State University (USA)

- Conducted advanced research in **chemical physics and computational modeling**; primary author of multiple peer-reviewed scientific publications.
- Developed and extended **C++ scientific software** for simulation and analysis of experimental data.
- Delivered undergraduate and graduate-level teaching in physical chemistry and computational methods.
- Trained in scientific writing, grant proposal preparation (NSF-style), and high-performance computing practices.

MBA Intern / Computer Modeller — DHL Management (Switzerland)

- Built **Excel/VBA-based analytical models** for customer profitability and financial data validation across large enterprise datasets.
- Improved financial close processes, data quality, and reporting lead times.

Computer Modeller — Procter & Gamble (Belgium / UK)

- Led joint supply-chain finance optimization initiatives with City University London.
- Developed **Excel/VBA decision-support tools** for cost optimization and scenario analysis supporting senior management.

Specialist Scientist — Hellenic Army (Greece)

- Served as a specialist scientist supporting technical and analytical functions.

Selected evidence & governance work

(Clinical validation, privacy, security, AI governance)

Clinical validation & App Store evidence (iOS, Apple Guideline 1.4.1)

- Led an end-to-end **hospital-supervised validation study** for ePokratis MedAiConnect (iOS) integrating **6 Bluetooth-connected medical devices**, designed explicitly for **Apple App Store Review Guideline 1.4.1 - Safety - Physical Harm** evidence expectations.

- Validation scope: **TaiDoc TD-3128 (BP/PR), TD-8255 (SpO₂/PR), TD-1241 (thermometer), TD-2555 (scale), Contec PM10 (ECG HR), TaiDoc TD-4216B (glucose, β-ketone, total cholesterol, uric acid, lactate)** vs **hospital-grade reference equipment**.
- Study executed at **Athens Hospital (Hygeia Group)** (Feb 6 - Mar 6, 2025) with **27 participants (age 20-91)**; **23/27** participants provided blood samples for multiparameter biomarker validation; repeatable protocols with supervised side-by-side comparisons.
- Formal governance: conducted under a signed collaboration memorandum; datasets used for analysis were **pseudonymized**, with **re-identification keys retained by the hospital**; execution aligned with GDPR principles (consent, minimization, EU-only processing).
- Statistical methods: **ICC3/ICC3k**, **Bland-Altman bias + 95% LOA**, **MAD**, and **Agreement %**, generating audit-ready tables/figures from traceable **Excel to Python** workflows.
- Mapped accuracy outcomes to relevant standards and clinical thresholds (e.g., **ISO 81060-2**, **ISO 80601-2-61**, **ISO 15197:2013**, **IEC 60601**, **ASTM E1965**, **OIML R76-1**, and CLIA/CAP-aligned tolerances where applicable).
- Operational integrity: supervised workflow with **clinical cross-verification that app-displayed values matched device outputs**; daily Excel logs shared with the hospital for transparency and archival; **no observed missing values/corruption** across tested devices.
- Secured a **signed Clinical Endorsement Letter** by an interdisciplinary hospital team (cardiology, laboratory leadership, nursing), confirming protocol adherence, real-time verification of app-displayed values, and endorsement for supervised clinical use (triage/follow-up, chronic monitoring, telehealth support).
- Safety framing: the app **does not provide diagnostic or therapeutic recommendations**; it records and visualizes validated measurements with clear labeling to reduce misinterpretation risk.

Key validation outcomes (study summary)

- Reliability (ICC): BP monitor ICC3k **0.993-0.994**; thermometer ICC3k **0.992**; weight scale ICC3k **0.99997**; ECG HR ICC3k **0.999**; biomarkers ICC3k **0.960-0.999**.
- Accuracy (examples): ECG HR bias **−0.54 bpm** (LOA −2.09 to +1.01); glucose bias **+0.22 mg/dL**; SpO₂ bias **+0.19%**; temperature bias **−0.02°C**.
- Bluetooth integrity: **100% successful transmission** and **100% match** between device display and in-app logged values across all six devices.

Privacy-by-design for AI camera measurements (iOS vs Android governance)

- Implemented and documented on-device AI processing: **no photo/video upload or storage** for camera-based wellness estimates.
- iOS governance: AI measurement outputs are **session-only** (not stored).
- Android governance: AI numeric results are **saved to history and synced**, with clear provenance labels (**AI / Device / Manual**) and **device model attribution** for device readings; **per-item deletion syncs** across signed-in devices.

Data protection & security controls (GDPR-aligned)

- EU/EEA hosting (Hetzner, Germany) under GDPR DPA; **TLS in transit** and **application-layer AES-256 at rest** for sensitive records.
- Defined role-based access / need-to-know access patterns and documented user rights flows (access, deletion, withdrawal of consent), including account deletion and retention principles.

Consent & high-sensitivity flows (national identifier / location)

- Designed consent governance for national identifier (SSN) usage in purchase flows (doctor sessions / device e-shop), including user controls (e.g., **Manage SSN Consent**) and purpose limitation.
- Documented optional **location features**: one-time **Send Location**, and Android opt-in **event-based Location Sharing** (not continuous background tracking).

Education

- **MPhil, Computer Science (Medical Imaging & Computer Vision)** — University College London (UCL), 2013-2015

- **MBA (Distinction)** — Bayes Business School, 2008-2009

- **PhD, Chemical Physics Program** — The Ohio State University, 2000-2006

- **BSc, Chemistry** — National & Kapodistrian University of Athens, 1995-1999

Technical stack

- Project / delivery: Jira, Trello, ClickUp, Miro, Figma, GitHub

- Cloud & integration: Azure (REST APIs, Functions/Durable Functions, Logic Apps, Service Bus, Blob/Table Storage, Azure SQL), Azure DevOps

- Data & reporting: Power BI; (some exposure: ADF / Synapse / Databricks)

- Security & compliance: GDPR, TLS/HTTPS, application-layer AES-256, RBAC/need-to-know

- Languages: Python, C#, C++, R, VBA

- Infra / IT: Windows Server 2022 (AD/DNS/DHCP/GPO, DFS/NFS, FTP/SFTP), VPN, VLANs, firewalls, NAS, monitoring