

Goal

- Meet new tech and market challenges with the best tools available today. Contribute deeply, learn deeply.

Summary

- Hands-on lead engineer, full-stack software developer, mentor, solution innovator, new product producer.
- Dedicated to sustained cycles of innovation: new, solid code that is easy to test, deliver, extend, and support.
- Experienced in design, UX, training, doc. Strong empathy with other disciplines: quality, product, timelines.

Tech Skills

- **SQL, ObjectScript, REST, APIs, FHIR, C-CDA, JSON, XML, XSL, XPath, XSL-FO, HTML, JavaScript, CSS, OMOP.**
- Classes now: **Python** - #100DaysOfCode Pro (Yu), **Cloud** - AWS Certification Series (Maarek) - Udemy.com
- Individual portfolio: <https://susankorgen.github.io/cygnnet-software/> - ongoing updates

Education

- Harvard University – **MLA in IT, Information Management Systems**. Earned while working full-time.
- Smith College – **BA, Mathematics** – magna cum laude, Phi Beta Kappa. Music composition awards.

PRINCIPAL SOFTWARE DEVELOPER – 2009 to present – InterSystems Corporation, Cambridge, MA

InterSystems: HealthShare Unified Care Record – 2019 to present

- Remove risk factors in C-CDA data intake, build performant, reusable tool to safely repair millions of records.
- Update data transformation mapping tool/code generator (see 2017): it now supports OHDSI OMOP CDM6.
- Enhance, modernize a healthcare data interoperability engine and data store with a worldwide install base.
- Guide epics and tasking. Develop new talent. Find, leverage existing, unused knowledge or skills on the team.
- Engage with teams across InterSystems to ensure architectural uniformity and data integrity across products.

InterSystems: Care Community - 2018-2019

- Primary architect and implementer of new code base. Author of data model, back end, and API code.
- Designed, built new Care Plan management software for national health organizations (UK NHS).
- Handled care plan authoring, multiple local languages, auditing, document lifecycle management.
- Clinicians, patient, health proxy can share access care plans via the HealthShare patient data record.
- Coached agile scrum, demonstrating a measurable advance in deliverable product every 2 weeks.
- Helped shape roadmap: FHIR interoperability, care team management, event notification, data bindings.

InterSystems: FHIR (Fast Healthcare Interoperability Resource) Transformations – 2017-2018

- Led team to provide FHIR STU3 patient data transformations to/from InterSystems proprietary data format.
- Invented code generation framework to map patient data between any major schemas (HL7, more).
- Tool allows domain experts such as clinicians to express mappings between patient data fields simply.
- Based on mappings, tool generates executable transformation code and online documentation of mappings.
- Cut project staff/time load by 50% and produced 400% as much code (all FHIR resources) for STU3 vs. DSTU2.
- InterSystems products that use this FHIR STU3 code: IRIS for Health, Health Connect, HealthShare.

InterSystems: Coordinate My Care – UK National Health Service – 2015-2017

- Built UI and API for a document authoring, updating, and approval workflow for clinicians and patients.
- NHS required Internet Explorer 6-9, current browsers, and mobile phones. Under severe time constraints, I co-built a data-type-driven UI code generation framework that managed the workflow, and delivered with it.
- System accurately delivers detailed patient care plans in seconds to London EMTs responding to urgent calls.

PRINCIPAL SOFTWARE DEVELOPER – 2009 to present – InterSystems Corporation (continued)

InterSystems: 2009-2015**IRIS, Caché (database and development platform)****Ensemble, HealthShare (application integration, healthcare interoperability)****Patient Index, Provider Directory (identity matching and management)**

- Designed UX, coded UI to manage data quality for identity products Patient Index, Provider Directory.
- Wrote UIs (JavaScript, HTML, SCSS, CSS, AngularJS, angular), contributing to Ensemble, HealthShare, IRIS.
- Wrote APIs (REST endpoints, swagger doc, wrote the back-end service code in ObjectScript and SQL).
- Wrote ObjectScript class code (O-O proprietary language, like Java, gives object view of platform data).
- Wrote SQL queries (using an embedded SQL projection for manipulating the same data and logic).
- Worked directly with the underlying multidimensional data storage (globals) for ease and speed.
- Wrote and generated transformations (XSLT for XML, DocBook, Java) and scripts (Python, UNIX shell).
- Contributed components to the InterSystems core platform products IRIS, Health Connect, Ensemble.
- Found and examined the deeper InterSystems platform code in C, C++ (when needed).

PRINCIPAL TECHNICAL WRITER – 2002-2008 – InterSystems Corporation, Cambridge, MA

InterSystems: 2002-2008**Caché (database and development platform)****Ensemble (application integration, healthcare interoperability)****Zen (data-driven UI code generator)**

- Wrote XSLT transformation that still generates all documentation for all InterSystems products, as PDF.
- Source is DocBook XML: 1000+ pages, arbitrarily complex content, running error-free daily for 15 years.
- Designed page layout UX for all 3 supported book types and for their supported sets of DocBook tags.
- Originated all documentation, code examples, demos for the (then-new) products Ensemble and Zen.
- Originated project to document for customers, all performance tuning and option settings for Caché.

CONSULTING TECHNICAL WRITER – Highlights before 2002 – Software Developer and User audiences

- **Funk Software**, Cambridge, Mass: Steel-Belted RADIUS, an implementation of the RADIUS network security standard for authentication, authorization, and accounting – RFC 2865 and others.
- **Funk Software**: Proxy, a PC remote access tool providing an individual virtual private network (VPN).
- **Midnight Networks**, Waltham, Mass – Anvil and other products. Network validation tools. This successful tiny startup simulated high network loads. Now a Harvard Business Review case study.
- **ACM SIGDOC Paper**: “Object-oriented, single-source, on-line documents that update themselves.”
- **Boston Technology**, Wakefield, Mass: Telephony switching hardware, voice recognition software.
- **Cullinet**, Westwood, Mass: DECVoice. One of the earliest voice simulation products to speak from text.

PERSONAL INTERESTS

Family and friends. Argentine tango. Opera, classical, ballet, theatre. Travel, reading, nature, DIY.

ORIGINS AND PLACES

Longtime resident of Newton and Boston area. Raised in college towns: US Great Lakes, Northwest, Southeast. Favorite life places: Boston, Berkshires, Cape Ann, Venice and Veneto, New Orleans, British Columbia, Corvallis.