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Costa Shapiro

is **engineering software** since the early 90's:

- Over a decade of development **leadership** experience
- The first **owned** and paid project while still in high school
- A total of 10 years of formal **computer science** education
- With the **Internet** and its whole stack of technologies since early days
- Business pragmatism and delivery orientation, and also, organisational flexibility

Selected Relevant Technologies

Ruby world — my current general-purpose/business-logic language of choice — and everything around it

Java world — the language of my Master work — and the gateway into the mighty JVM with everything around it

ECMAScript (aka **JavaScript**) world — the web scripting language(s) with everything around it (from **HTML5** APIs to bleeding-edge frameworks) — which is also useful for some microservices

SQL world — still the default DBMS model/language — with its continually advancing technologies and tools

NoSQL world — notably including search and pub/sub systems — good for optimising data access ad hoc

Docker, Kubernetes and friends (SW production/deployment), **Python** and ML friends, **Erlang** and friends, **Rust** > **Go**, **FFmpeg** and friends (**A/V** processing), various **RFC**s-based technologies, **Git** and friends, etc

Historically Relevant Technologies

C/C++ world — Boost, Tuxedo, MFC, OWL, VxWorks, Tornado, ACE, Turbo Vision

Backbone+Marionette (JS), Apache Cordova (PhoneGap), Web browser extensions

bash, ksh, PHP, Perl, Tcl/Tk, Visual Basic, Pascal, COBOL

MS Access, Paradox/BDE, dBase, Clipper

CORBA, DCOM/ActiveX

Various Apache Jakarta technologies, JavaCC

Win32 userland, FreeBSD-based internet server setup, DOS

Studies

1999-2003	Technion (CSD) – M.Sc. in Computer Science (cum laude) **"Object-Oriented Implementation of Reconciliations"** (Reconciliations in Java) thesis
1995-1998	Technion (CSD) – B.A. in Computer Science (cum laude)
1991-1994	BOSMAT (Automatic Data Processing course) – Speciality Matriculation Certificate

Jobs

2019-Present Software engineering consulting at costa works

Self-server platform assembly, offering the complete whole-stack container-based personal "operating system" for rapid prototyping of classical centralised systems or next-gen peer-to-peer systems' deployment

BDD and various system specification level expertise

Technical leadership in ML-heavy backend architectures in start-up projects

Open-source video production pipeline component implementation and integration

Public speaking and private consulting on R&D processes and tools

Data extraction, processing and presentation works

– Docker, cloud resource providers (GCP, AWS etc); Python-based ML, Ruby-based management and administration; Rust-based high-performance binary processing optimisation; Golang-based system modules; Erlang-based high-throughput microservices; many more data management systems and protocols

2017-2019 Server Team Leader / Chief Security Officer, and then, CTO at Owlytics Healthcare

System back-end development & maintenance, including of large-data-volume analytical components

Information security compliance planning & supervision

Data ingestion / stream processing system architecture and execution

Wearable sensor data ML research for healthcare

Full data ingest+analysis+report production system ownership

– Docker, Kubernetes and related technologies (on GCE, AWS); Ruby technologies for admin components, system tests, etc; Python technologies for data analysis; Apache technologies, such as Kafka and Lucene (Elastic stack); other NoSQL technologies, Elixir (Erlang VM)

2016-2016 Core Developer at Peer5 (core product team)

Web (client-side) video P2P delivery plug-in system maintenance

Trying to stabilise and extend the niche product technology

– Docker technologies, NodeJS, HTML5 APIs, web video players APIs

2015-2016 Software Architect at Showbox (video processing and data management back-end system)

video editing and delivery workflow back end ownership, video montage engine development

– Ruby on Rails, FFmpeg and similar technologies, Redis, multi-process multi-service high-speed processing architecture

2011-2014

Project Lead, Core Developer and Consultant at [Astrails](#) (various web/mobile app projects)

technology expertise, architecture and interface design, wireframing, prototyping, requirements specification, production implementation, engineering support and management of web+mobile app projects

– Ruby on Rails, Backbone+Marionette, NodeJS, RSpec, and a great deal of other contemporary client- and server- side technologies

2009-2010   Senior Software Engineer at [RSA](#) (Verified by Visa / MasterCard SecureCode project, Herzliya)

production and development maintenance of the technologically complicated SAAS product family

– Java EE, C++/Boost/Tuxedo, ORACLE SQL, Python, bash, ksh, Tcl/Tk & other scripting

2007-2009   Senior Software Engineer at [Nielsen](#) Online (projects on interactive distributed systems for large-volume text-mining analysis, Herzliya)

full ownership of the company's core Consumer-Generated Media analysis project

solving stability, maintainance and performance issues on component and system levels

– Java EE & Apache Jakarta technologies (notably incl. Lucene), C++/Boost, SQL & custom DBMS's, XML processing, standard & custom client-server transports, bash & other scripting

2005-2007   Technological Leader and Founder at a personal information management web service start-up project

technology development (interface definitions, system architecture, algorithm and database design, etc)

start-up company related activities

– front-end web technologies, PHP5, Java EE & Apache Jakarta technologies, JDBC, PostgreSQL, FreeBSD, common internet server software

2002-2004   Senior Software Engineer at [Intel](#) (pre-silicon VLSI power estimation tool project, integrated VLSI CAD system, CAD Dept., Haifa)

VLSI technology domain experience (including system input/output specifications and real-data analysis)

subsystem architecture development

internal customer engineering support (VLSI projects)

cross-project coordination and developemnt

– C++, VLSI knowledge, internal infrastructure framework, Tcl/Tk, Perl

2000-2002

Software / Integration Engineer at [Qualcomm](#) (several cellular communication related software-hardware projects, Haifa)

CDMA technology domain experience (both parties plus simulation/testing)

full-circle development of a hardware driver framework and applications

development, maintenance and refactoring of a distributed testing/simulation infrastructure

cell-phone system integration (including development of mid-layer embedded communication software)

– RT/Embedded systems, VxWorks, Tornado, CORBA, Visual C++, ARM, proprietary DSP, hardware-level protocols (cPCI, flash memory, etc), Win32, Perl

1999-2000 Software Developer (part-time) at Extent (former, acquired by [Alepo](#)) (Billing & Mgmt. RADIUS ISP web-managed server project, Ramat Gan)

development of custom management and report software modules

– cross-platform C++, SQL (various DBMS's), Apache HTTP server, proprietary front-end template framework

1998-1999 Teaching Assistant at [Technion](#) (basic CS courses, [CSD](#), [CEESD](#), Haifa)

1997-1998 Software Developer (part-time) at NetManage (former, acquired by [Alepo](#)) (several internet client projects, Haifa)

common internet protocols experience (email, ftp, telnet, etc)

client software module development (including GUI components)

infrastructure works

– Visual C++, MFC, DCOM/ActiveX, range of internet protocols, Win32, other application technologies

1995-1997 Software Developer (part-time) at the [the Technion's Asher Space Research Institute](#) (TechSat microsatellite project, Haifa)

design and implementation of complex physical algorithm modules

implementation of telemetry-processing modules (including database design and usage

implementation and integration hardware driver modules (GPS, etc)

– C/C++, x86 assembly, Visual Basic, Paradox/BDE, various hardware interface protocols, Win32 (including GUI)

1992-1993 Software Developer (part-time) at [the Technion's Center for Promotion of Learning and Teaching](#) (A project of robotic manipulator based educational aid for spatial reasoning development course, Haifa)

design and implementation of robotic manipulator software (including GUI, command language, robot control and simulation)

– Pascal, Turbo Vision, x86 assembly, proprietary robot interface protocol, DOS

December 2023