

# Tim Tyler

Synopsis: Senior software engineer

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## Skills

I am an *experienced* computer programmer:

- I started *programming commercially* in 1983 – 41 years ago;
- I started *designing web sites* in 1995 – 29 years ago;
- I began working in *Java* in 1998 – 26 years ago;

I've worked with these technologies:

- Java and Java EE;
- [Spring](#) and [Hibernate](#);
- SQL, MySQL, [MongoDB](#), SQLServer
- HTML, CSS and web site design;
- JavaScript, AJAX and DHTML;
- [Amazon AWS](#) - including [EC2](#), [S3](#), [EB](#);
- [Terraform](#) and [Terragrunt](#) (IAC);
- Build automation tools ([Gradle](#), Maven)
- Continuous integration ([Jenkins](#), etc)
- Testing ([JUnit](#), [TestNG](#), [Mockito](#));
- JSON, XML and RESTful APIs;
- [Python](#), Perl, PHP;
- C, C++, assembly (ARM, 6502);
- [Elastic search](#);
- [ANTLR](#) parser-generation tool;
- Unix and Apache administration;
- Version control systems (GIT, SVN);
- IDEs – I use [Eclipse](#) and [IntelliJ](#);

I can use the Amazon AWS Elastic Compute Cloud. I can use Windows, MacOS and Linux.

## Employment History

**Staff software engineer – [Vestmark, Inc](#) (Boston, USA)**

**Mar-2017 – Feb-2024**

[Vestmark](#) is a “fintech” company specializing in wealth management.

I was hired to help revitalize their Java-based back end. While there, I:

- Removed legacy Enterprise Java Beans - and replaced them with [Hibernate](#) and [Spring](#);
- Reworked the dependency injection to use an “inversion of control” approach;
- Developed and deployed AWS components – using [Terraform](#) and [Terragrunt](#) (IAC);
- Managed the upgrade from [JUnit](#) 3 to JUnit 4 and the upgrade from JUnit 4 to JUnit 5;
- Deployed a modernized system using [Apache Camel](#) and [Apache Karaf](#);
- Polished and deployed a [Spring Boot](#) “satellite” application – to allow portfolio inspection;
- Extensive work on adding import / export facilities to the main application (integrations);

[Vestmark](#) used [SQLServer](#) via [Hibernate](#) for persistence; [JUnit](#) and [Mockito](#) for automated testing; [Gradle](#) to build; [Jenkins](#) for continuous integration. [React](#) was the basis of the front end.

**Software engineer (Java) – [Pragya Systems](#) (Boston, USA)**

**Jul-2015 – Jan-2017**

This was work for an educational technology company offering cloud-based content management and search services. Here I:

- Worked on their main application which was based on [DropWizard](#) and [Spring](#);
- Developed and maintained their [Elastic Search](#) queries;
- Worked on their NLP API, interfacing to [IBM's Watson](#);
- Worked on their sharing and permissions systems;
- Worked on importing data from multiple customer systems;
- Created multiple reports to visualize historical records - using [D3 charts](#).

They used [MongoDB](#) for persistence; [TestNG](#) and [Mockito](#) for automated testing; Maven to build; [TeamCity](#) for continuous integration. [KnockoutJS](#) was the foundation of the front end.

**Software engineer (Java) – [ScaleBase, Inc](#) (Boston, USA)**

**Apr-2012 – Jun-2015**

ScaleBase made a scalable, distributed database, compatible with MySQL. Here I:

- Performed an ANTLR-based revamp of the main SQL parser;
- Replaced logging system with Logback and SLF4J;
- Replaced Derby configuration database with [H2 database](#);

- Handled the upgrade from Java 6 to Java 8;
- Created an HTML front end for the unit test system;
- Developed a RESTful API, using Jersey;
- Created a management center, using Swing;
- Added redundancy feature to the configuration database;
- Acted as Maven / Hudson build engineer;
- Developed and maintained Perl installation scripts;
- Revamped the exception-handling system

## My 2011 book: Memetics – Memes and the Science of Cultural Evolution

My interest in cultural evolution led me to write [a book on Memetics](#). It was published in 2011 and is available on [Amazon](#). It is a popular science book that covers modern scientific efforts to expand the domain of Darwinian evolutionary theory to cover all of human culture.

## Domains

The following domains are some of my web sites. Some showcase my programming work:

Tim Tyler	<a href="http://timtyler.org/">http://timtyler.org/</a>	My home page: an index of my other sites
Springie	<a href="http://springie.com/">http://springie.com/</a>	Java tensegrity simulator
Texture Garden	<a href="http://texturegarden.com/">http://texturegarden.com/</a>	Java algorithmic texture generator
Rockz	<a href="http://rockz.co.uk/">http://rockz.co.uk/</a>	Java game with rock and diamond puzzles
Lotus Artificial Life	<a href="http://alife.co.uk/">http://alife.co.uk/</a>	Artificial life - synthesizing living systems
Hexagonal Domes	<a href="http://hexdome.com/">http://hexdome.com/</a>	Geodesic domes
Mandala Centre	<a href="http://mandala.co.uk/">http://mandala.co.uk/</a>	Cryptography and compression
Matching Pennies	<a href="http://matchingpennies.com/">http://matchingpennies.com/</a>	Machine Intelligence, machine learning
Cellular Automata	<a href="http://cell-auto.com/">http://cell-auto.com/</a>	Cellular automata
CA FAQ	<a href="http://cafaq.com/">http://cafaq.com/</a>	Cellular automata FAQ
Mersenne web site	<a href="http://4095.com/">http://4095.com/</a>	Computer consultancy

## Qualifications

Here is a list of my qualifications and certificates:

### • Degree-level

Dates	Establishment	Qualification	Subject
1987→1990	<a href="#">Bristol University</a>	BSc	Mathematics

### • A-levels and S-levels

Dates	Establishment	Qualification	Subject
1985→1987	<a href="#">Exeter College</a>	A & S-Level A-Level A & S-Level	Pure Mathematics Applied Mathematics Physics

### • O-levels

Dates	Establishment	Qualification	Subject
1981→1985	<a href="#">Hele's School, Exeter</a>	O-Levels	9 including: Maths, Physics, Chemistry, IT and English.

## Location

I live in Arlington, MA. I am willing to work in an office, hybrid or remote as needed.

For office work, I am primarily looking in the greater Boston area.

## Contact

An *online* version of this CV has more details in it. It is available at: <http://cv.timtyler.org/>

My contact details are at the top – or see: <http://timtyler.org/contact/> Thank you for your interest.