

BIOGRAPHY

- ❖ Over twenty five years of IT experience with more than sixteen years of technical leadership.
- ❖ Roles: Inventor, Conference Speaker, Mentor, Architect, Project Manager, Agile Technical lead, Researcher, Designer, Analyst, and Programmer.
- ❖ Technologies (Expert level): Web Technologies, Agile Development, Functional Programming, Object Orientation, Distributed systems, RDBMS, Rule-Based/Metadata systems, Java/JEE, JavaScript.

TECHNICAL EXPERIENCE

- ❖ **Platforms:** OS X, Unix, and MS-Windows.
- ❖ **Software:**
 - Java (21 Years), including: Maven, Ant, Spring, Hibernate, JPA, JMS, JEE, JUnit, Selenium, Spark Java, and RESTful services.
 - JavaScript (12 Years): EcmaScript6/7, Webpack, Desktop & Mobile browsers, Server (Node, Phantom, Express). Single Page Apps (SPA), React, AngularJS, Web Components, jQuery, Jasmine, Mocha, MathJax.
 - Database: MongoDB, SQL, JDBC, ODBC, MS-SQL Server, IBM DB2/UDB, MySQL, Oracle.
 - Internet: HTML5, HTTP, JSON, Ajax.
 - Other Languages: Elixir (1 Year), Scala (6 Month), Groovy/Grails (6 Month), Delphi (3 Years), C (5 Years), and C++ (3 Years), Ruby (6 Month).
- ❖ **Technologies:**
 - Methods: Functional Programming (FP), Agile (XP) and Iterative. Scrum, Test Driven Development (TDD), Behavior Driven Development (BDD), OO A/D/P, UML, Design Patterns, SOA.
 - Distributed Systems: Multi-Tiered architectures, Client/Server, Internet/Intranet/e-Commerce applications.
 - Rule Based/Metadata engines analysis, design, and implementation.
 - Languages and Compiler analysis, design and implementation. Used Lex, Yacc, and Antlr.

PROFESSIONAL HISTORY

TD Ameritrade, Senior Consultant/Senior Manager, Ann Arbor MI, January 2015-current

- ❖ **Architect and Tech Lead For East Asia Systems**
 - Enable account opening and trading for clients in East Asia. Support multiple locales and national regulations.
 - Mentor engineers to become better craftsmen/women. Introduced Git, TDD, CI/CD, micro services.
 - Technologies used: Java 8, Spring, maven, AngularJS, micro services, Pivotal Cloud Foundry (PCF).
- ❖ **Architect and Tech Lead For Robo Advisor Team**
 - Enable casual investors to invest based on their preferences like risk tolerance, length of investment, ...
 - Upgraded system to use simpler architecture and less code. This saved on cost of upgrades and maintenance.
 - Technologies used: Java 8, Spring, AngularJS, React, Selenium, CypressJs, Webpack, Git.
- ❖ **Senior Researcher in the Advanced Technology Group**
 - Created a system for multi-factor authentication using biometrics.
 - Created a system for high speed multi-client messaging.
 - Created a system for real-time monitoring of social networking. Used NLP and Sentiment analysis for early detection of TDA systems issues.
 - Created an intelligent system for human-machine vocal interaction: somewhat similar to Alexa or Siri but with better financial capabilities. A US patent #10,217,260 was issued for some of my work.
 - Technologies used: Java 8, JavaScript, Elixir, Tomcat, Spark Java, HTML5, Speech I/O, Node, Spring, RabbitMQ, Lucene, Stanford NLP (Natural Language Processing), Apache NLP, Neural Networks/Deep Learning, MongoDB, Amazon Web Services (AWS).

Pillar Technologies, Independent Contractor, Cincinnati Ohio, January 2008-January 2015

- ❖ **Tech Lead at a Book/eBook Publisher**
 - Created systems which allowed instructors to grade students and view their grades (Gradebook)
 - Created systems which allowed students, instructors, and researchers to read and review books online.

- Applied TDD, Scrum, and high test coverage.
- Technologies used, SPA, JavaScript, Angular, Grunt, Jasmine, Java, RESTful services, MongoDB, Jenkins, OSGi, Karaf/Aetos, ActiveMQ.
- ❖ **Tech Lead at a Food Distributor**
 - Created systems which allowed managing inventories and lists for customers.
 - System allowed users to customize their inventory levels and thresholds, create comparative pricing and quotes.
 - Applied TDD, 2-weeks iterations, and 90% + test coverage.
 - Technologies include: Spring, JPA, Struts-2, JUnit, Yahoo YUI, and JQuery.
- ❖ **Tech Lead for Measuring Business Integrity Index at a startup**
 - Created a system that market and financial data about a company to calculate an *Integrity Index*, this index can be used to predict future trends for that company.
 - Applied TDD, daily iterations, and *continuous deployment* to build the system.
 - Technologies include: Scala for back end work, Groovy/Grails and JQuery for front end.
- ❖ **Tech Lead for an Automatic Characterization Test Generation at an Insurance Company:**
 - Created a system which generates characterization test (e.g. JUnit) cases for Java legacy systems.
 - The system records program's behavior at run time, and generates test cases based on recorded values.
 - The system helps bootstrapping the creation of test cases for legacy systems without test coverage.
 - Apply TDD and Speed-To-Value (S2V) in system design and implementation.
 - Technologies include: AspectJ, JBoss AOP, JUnit, EasyMock, JMock, Service Provider Interface (SPI), and Reflection API.
- ❖ **JEE Architecture and Team Lead at a Services Company:**
 - Fine tune application performance and database operations.
 - Apply TDD and Speed-To-Value (S2V) in system design and implementation.
 - Introduced new ideas in inter-system interactions that saved more than 50% in effort and budget.
 - Created applications that monitor systems health.
 - Technologies include: Spring, Hibernate, JUnit, Quartz, Spring MVC, FindBug, Ant, and Oracle DB.

Several Organizations, Ohio, 1990-2008

- Companies: Cardinal Solutions, Fusion Alliance, Relizon, Sogeti/Cap Gemini, Wright State University.
- Technologies included: Java, J2EE, EAI, Rule Engines, Oracle DB, WebLogic, WebSphere, WebMethods, Neural Networks, Delphi, C, C++, VB, Modula-2, Assembler.

EDUCATION / CERTIFICATION

- ❖ Sun Certified Programmer for the Java 2 Platform, 1999.
- ❖ M.S. in Computer Engineering. 1994. Wright State University, Dayton, OH
- ❖ B.S. in Computer Engineering. 1988. King Saud University, Riyadh, Saudi Arabia.

COMMUNITY / SOCIAL

- ❖ tek271.com, github.com/ahabra, twitter.com/ahabra, ahabra.tumblr.com
- ❖ CodeMash 2015 Conference presentations. EcmaScript 6 Now, and Elixir For The Impatient.
- ❖ Craftsman Guild presentation. Intro to Elixir language: www.meetup.com/Craftsman-Guild/events/127637602/
- ❖ Great Lakes Functional Programming Conference 2012. Functional Programming With Javascript: www.github.com/ahabra/fpjs
- ❖ International Conference on Collaboration Technologies and Systems. Technical administrator since 2007. <http://cts2016.cis.edu.info> Usually held in cooperation with IEEE and ACM.
- ❖ International Conference on High Performance Computing & Simulation. Technical administrator since 2007. <http://hpcs2016.cis.edu.info> Usually held in cooperation with IEEE and ACM.