

# CROCKETT H. HOPPER

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M.S.E.	Software Engineering	University of Texas
B.S.	Computer Science - Mathematics	Henderson State University

Graduate Thesis: Establishing the Completeness and Correctness of a Domain Object Model

Data Mining: Convenience Store Data Analysis Using Market Basket Clustering

Honors: National Merit Finalist, Arkansas Scholar, Byrd Scholar

Member: IEEE Computer Society

## Career Skills & Knowledge

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Scalable, secure, multi-tier system architectures	Ruby, Rails, Java, JEE, C/C++, VB
Client/Server and Web/Internet development	Windows, Unix, AIX, HP-UX, Linux
Software Development Lifecycle management	Software Engineering Best Practices
Engineering Management	MySQL (NDB, InnoDB), DB2, Oracle, SQL Server
Video conversion pipeline upload/transcode/stream	Apache, Nginx, Mongrel
CDN integration: HTTP, Web Services, & Flash	Search: Lucene, SOLR, Google GSA, Ferret
Systems Security: Role Auth, SSL, SSO, secure URIs	e-commerce payments, store, catalog, cart, integration
Business object modeling: requirements & architecture	Artifacts: MS Project/Visio, UML, Simulations

## Career Achievements

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As the executive in charge of all software development for Mytoons, defined the architecture for the business vision of a social media site for animators. Recruited, hired, trained, and managed a team of twelve while building the social media site into a robust e-commerce platform.

Created the software development process for Mytoons, applying software engineering principles to introduce an appropriate level of process rigor for the agile team: key elements included configuration management, quality assurance, requirements engineering, architecture, domain object modeling, daily builds, short iterations, and defect management.

Successfully delivered multiple key features for Mytoons including the private beta and public launches of the site, first-in-the-market HD Animation Streaming, world-class digital portfolio system, and unique digital goods e-commerce system: managed the project planning and work scheduling for all software projects using a combination of milestone scheduling, inch-pebble task breakdowns, and short iterations to continually refine the schedule and provide detailed insight into progress.

Designed and implemented a Java JEE service-oriented architecture workflow for USAA's loan origination system built on IBM's Websphere Process Choreographer Business Process Execution Language (BPEL) engine: the overall project dramatically improved the organization's capacity to process loan applications.

As a Senior Client/Server developer for Alltel Information Services, designed and implemented large-scale, high-volume transactional Internet Banking applications for the top 100 US banks: interfaced with customers in a pre-sales support role to provide architectural guidance for integration plans at sites in Australia, Philippines, Puerto Rico, and multiple US cities: trained client teams in the architecture and operational competencies, thereby ensuring high-availability of the application and reducing support costs: taught several week-long courses for current and potential clients that improved customer satisfaction and secured sales.

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## Career Experience

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### Mytoons, Inc.

#### VP, Engineering

Managed team of 12 developing a Java animation tool, a C++ interactive animation game, and the mytoons.com web application: developed a custom digital-goods ecommerce pipeline, a world-class content management system for animators to present their work, and an extensive administration interface for marketing and business site management.

#### VP, Web Engineering

Directed flagship program from concept to implementation: selected the hardware and software platforms for development/test/production systems, as well as the application development tools and technologies: contributed daily as a hands-on team member in coding, leading defect reviews, mentoring developers, scheduling, estimating, tracking, resource planning, recruiting, interviewing, leading design and code reviews, testing, executing production maintenance, and deploying releases.

### USAA

#### IT Programmer/Analyst

Developed retail loan origination applications using Java/JEE platform, IBM Websphere Process Choreographer, LDAP, and BPEL: researched techniques for improving the software development process, particularly with regard to requirements engineering through the use of object models, interview minutes, artifact traceability, and early verification and validation of the models.

### Alltel Information Services

#### Senior Client-Server Developer

Developed large-scale, retail Internet Banking applications using Microsoft MIFST, Site Server, SQL Server, IIS, and OFX: ported the application to IFX, Java, JEE, BEA Weblogic, and Oracle.

#### Software Development Intern

Designed and implemented a developer intranet providing a catalog of common objects and the associated documentation to improve code reuse across project teams: leveraged web technologies, Rational Rose, PVCS, Exchange Server, and SQL Server to facilitate the automated generation of interface documentation and allow developers to subscribe for updates to specific components.

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## Tools & Technologies

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- Programming Languages: Ruby, Java, C/C++, JavaScript, ActionScript/Flash, VBScript
- Markup/Query Languages: XML, XHTML, IFX, OFX, SQL, FDML, BPEL
- Application Platforms/Frameworks: Rails, JEE, Websphere, JBoss, Mongrel, Apache, Nginx
- Database Management Systems: MySQL (NDB cluster, InnoDB, MyISAM), DB2, Oracle, Sqlite
- Operating Systems: HP-UX, IBM AIX, BSD Unix, Linux, MS DOS, MS Windows, DEC VMS
- Development Tools: MS Visual Studio 6/.NET, Eclipse Java, RAD Rails, NetBeans, IntelliJ IDEA
- Architecture Tools: MS Visio, Rational Rose, Squeak, Naked Objects, Eclipse UML
- Project Management Tools: MS Project, Bugzilla, JIRA, Subversion, CVS
- Data Analytics Tools: Weka, MS Excel, Matlab, NetTracker, Google Analytics, Smarter Stats, Sawmill, Rails Log Analyzer, custom Ruby applications
- General Communication Tools: MS Word, MS Powerpoint,
- Configuration Management Tools: Git, SVN, CVS, StarTeam, SourceSafe, PVCS
- Defect Tracking Tools: JIRA, Bugzilla, StarTeam
- Application Servers: Sun Glassfish, JBoss, WebSphere, WebLogic
- Internet Video Tools: Flash, AIR, Adobe Media Player, On2 Flix/Publisher, Flash Media Server
- Architectural Patterns: Service Oriented (SOA), Shared-Nothing (commodity scale-out web/app tier), Shared-Everything (traditional scale-up on backend, such as for databases using replication and partitioning on high-performance hardware), Client/Server, n-Tier/Layered (managing complexity with the Law of Demeter), Model-View-Controller (MVC)