

# Ryan J. Rickerts

SR. SOFTWARE ENGINEER / DATA SCIENTIST

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## SKILLS

### // PROFESSIONAL

APIs & Web Services

Database Design

Data Analysis

Cloud Computing

Team Leadership

Architecture Planning

DevOps Modernization

CI/CD Pipelines

### // TECHNICAL

NodeJS / TypeScript

SQL (MySQL/Postgres) and  
NoSQL (MongoDB)

GraphQL / REST / SOAP

Ruby on Rails / Python

JS / HTML / CSS

C# / ASP.NET

Docker / Github / Gitlab

## EDUCATION

### MASTER'S DEGREE

Computer Science  
University of Illinois at  
Urbana-Champaign  
August 2021  
*Emphasis on Data Science*

### BACHELOR'S DEGREE

Math/Computer Science  
Western Washington University  
Bellingham, WA  
June 2005  
*Math Fellow (high level tutor)*  
*Double Major in Engineering*

## SUMMARY

A combined 15 years of experience in various aspects of full-stack application development—from dynamically generated web content to database & API design to server maintenance & middleware—has allowed me to bring superior browser-based experiences to users as well as reliability and maintainability to organizations who bear the cost of outages and long-term upgrade cycles.

I possess a unique ability to envision complex and abstract system design, see the best path forward—whether a legacy system upgrade or a brand new architecture plan— and communicate that plan to a team of developers as well as management & stakeholders.

Having worked in a diverse range of programming languages and development frameworks, I am able to recognize common patterns and implement best practices quickly, as well as collaborate with existing culture and document the work of others.

## EXPERIENCE

### ADVISOR | API BACKEND TEAM LEAD

*June 2021 – current*

IoT Research Project, UIUC — Globally Distributed

Helping a team of undergraduate students prepare a full-stack software application for its first production deployment with a limited budget and highly constrained architecture requirements (i.e. only on University of Illinois infrastructure). It emulates Arduino-based circuits and allows IoT students to deploy them in a virtual reality (VR) world simulation.

- Quickly learned a complicated stack with many interrelated services: TypeScript/REST/MongoDB, Python, C++, Docker, Unity VR, SocketIO, and more.
- Immediately brought actionable ideas for streamlining & stabilizing the architecture, simplifying deployment, and optimizing use of Docker containers.
- Helping coordinate & coach a team of 10 volunteers with diverse backgrounds and experience levels to make their first contributions to the project.
- Preparing a detailed research paper describing the project for grant writing and/or conference presentations.

### CTO | SOFTWARE SYSTEMS ARCHITECT

*Oct 2020 – May 2021*

Pairadime, Inc. — Globally Distributed

Served in the role of sourcing, creating, and onboarding all technology needs for a brand new startup with a niche concept in the real estate space.

- Coordinated IT onboarding and provided tech resources for 12 staff members.
- Managed a WordPress installation supporting 3 contributors (authors/designers), optimizing assets for SEO rankings while ensuring high availability, reliability & site quality.
- Introduced quick data processing automation: one from TypeForm input to Google Docs output using APIs via AWS Lambda functions, and several data pipeline workflows in HubSpot for connecting customers to realtors.

## COMMUNITY INVOLVEMENT

### CASCADE CROSS SERIES

Founder/Director  
Race organizing & promoting  
Bellingham, WA: 2007-2018

### WWU CYCLING TEAM

Founder/Director  
Div. II national champions  
Bellingham, WA: 2003-2005

### BELLINGHAM GREENWAYS

Mayor's Advisory Committee  
Bellingham, WA: 2014

### MT BAKER SKI AREA

Volunteer Events Crew  
Glacier, WA: 2011-2016

### WHATCOM EVENTS

Treasurer & Race Leg Chair  
Bellingham, WA: 2018-2019

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## REFERENCES

### MATTHEW CAESAR

Associate Professor  
Univ. of Illinois at UC  
847.323.2968  
caesar@illinois.edu

### JOE HOPPIS

Chief Executive Officer  
Pairadime, Inc.  
360.820.1777  
joe.hoppis@pairadime.com

### CHRIS NORMAN

Sr. Software Engineer  
Saturna Capital Corp.  
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tcn@saturna.com

## EXPERIENCE (continued)

- Guided a team of two React developers on building out a detailed specification of our first app experience - a legal document generator - and provided back-end engineering to handle data persistence.
- Built a custom browser-based home affordability calculator in JS and JQuery.
- Helped pitch our company vision to several seed investors by communicating the long-term product roadmap.

### SR. SOFTWARE ENGINEER

*Feb 2008 – July 2020*

Saturna Capital Inc. — Bellingham, WA

- Championed a major overhaul of a monolithic, legacy enterprise application by breaking out functional components into modern microservices.
- Designed a database synchronization procedure from scratch to push/pull a subset of customer data onto a MySQL-backed web application stack in real time.
- Built and upgraded complicated reporting and analysis modules for investment portfolio managers based on strict logic in a tightly regulated environment.
- Preserved data accuracy and software reliability in a highly sensitive context—people's life savings—and always put the customer experience first.
- Wrote extensive SQL views and exposed REST APIs for the customer account maintenance portal built in Drupal.
- Performed analysis on massive customer datasets in both relational databases and NoSQL (MongoDB) to ensure quality and normalization of key items like addresses, statements, account balances, transactions, etc.

### INDEPENDENT WEB DEVELOPER

*June 2006 – June 2012*

Rocket Designs — Bellingham, WA

- Provided web design & development services for community projects and small businesses.
- Customized an open-source Ruby on Rails application to manage and display dynamic web-based results for a series of bicycle races with 300 unique participants and 10 categories of riders.
- Learned industry grade graphic design programs such as Photoshop & Illustrator and provided vector art services for custom logos.

### JR. WEB DEVELOPER

*Sept 2006 – Feb 2008*

Socrates Group Consultancy (FKA DeWaard & Jones) — Bellingham, WA

- As the only employee not on contractor billable hours, maintained the quality of a shared codebase and CMS framework shared among all clients.
- Built out a complicated fleet management web application for a crane company using C#, ASP.NET, and SQL Server.
- Paired with several bright developers to learn best practices in object-oriented programming and non-normalized relational database design.

### PROGRAMMER

*June 2004 – Aug 2006*

Engineering Design Automation — Bellingham, WA

- Automated generation of SolidWorks 3D (CAD) drawings using VB.NET driven by inputs from Excel workbooks.
- Created accurate engineering models of real-world products then programmatically scaled them based on flexible parameters.
- Managed a project for a new client seeking rapid prototyping of new ASIC designs based on their customer demand.