

TONY MOWERS

Software Engineering & Data Science



Contact Information

Tony Mowers
Dorfgasse 36
CH-2514 Ligerz
Switzerland

tony@amowers.com
+41 22 534 91 80
www.amowers.com

Nationality

Swiss and Canadian

Education

Bachelor of Applied Mathematics
University of Waterloo, Canada

Data Science and Statistics Studies
Ongoing Independent Studies

Project Roles

- Project Manager/Team Lead/Architect: multiple Java/C#/JS/HTML client-server applications
- Software Engineering Consultant: multiple projects
- Commodities trader: Python/sklearn based algorithmic trading
- Technical trainer: XP programming, network management development
- Team Lead/Architect: C++ desktop applications
- Firmware Developer: Telecom & Public Transit devices

Teaching and Mentoring Experience

- eXtreme Programming/Clean Coding
 - Pair Programming
 - Test Driven Development (unit tests)
 - Refactoring code smells, refactoring to patterns
- Domain Analysis
 - Lean Canvas
 - Story Mapping
 - Behavior Driven Development
- Agile Software Development
 - SCRUM Master (Certified)
 - Product Owner (Certified)
- Mathematics
 - Linear Algebra, Data Science & Calculus

Publications and Conference Presentations

- *Journal of Spatial Research and Planning* #76
[Housing Space Overconsumption: Empirical Evidence for Switzerland](#)
- **Presenter:** Iqnite Geneva, Continuous Improvement
- **Presenter:** Iqnite Geneva, Domain Specific Languages & BDD

Recent Software Projects

2014 to Present

- 2020 - Present **Multi-platform based Application for Athletics**
Contract: Private Investor
- Responsibilities:** develop proof-of-concept, communicate with stakeholders
- Technologies:** Java, Spring Boot, REST APIs, React.js, AWS, Kafka, Docker, Cucumber
- 2018 - Present **Software Engineering Instructor**
Part-time: [Bern University of Applied Sciences](#)
- Responsibilities:** train undergraduate computer science students in industrial software engineering practices such as: eXtreme Programming, domain analysis, and CI/CD.
- Technologies:** Java, Spring Boot, REST APIs, AWS, Docker, Vue.js, Cucumber, Git, Git Actions CI/CD, Maven, Gulp, NPM, HTML, SCSS
- 2018 - 2020 **Elevator Products Configuration/Pricing/Quoting Solution**
Contract: [Vantage Elevation Solutions](#) -- Bronx, New York
- Responsibilities:** promoted: Software engineer->Architect->Project manager. Development of cloud-based product configuration platform for multi-national elevator parts manufacturer.
- Technologies:** Java, Spring, REST APIs, Hibernate, Cucumber, AWS cloud services, AWS CI/CD pipeline, Git, Jira, Maven, Gulp, NPM, HTML, SCSS, Postgres,
- 2017 - 2018 **Customer Portal and Point of Sales Solution**
Contract (client of 15+ years): [TalkTalk](#) -- Zug, Switzerland
- Responsibilities:** develop software solutions that improve customer onboarding process for telecom provider. Multiple solutions developed for multiple platforms such as: website, tablets, and passport scanning devices.
- Technologies:** C#, .NET, REST APIs, Javascript ES6, Vue.js, Wordpress, PHP, SqlServer, Gulp, NPM, HTML, SCSS
- 2015 - 2016 **Graduate Studies in Data Science and Statistical Learning**
Student: Neuchatel University and Online Courses
- Technologies:** Python, Java, Jupyter Notebook, Anaconda, Scikit-learn, Pandas, Tableau, R
- Publication:** *Journal of Spatial Research and Planning #76*
[Housing Space Overconsumption: Empirical Evidence for Switzerland](#)
- 2014 - 2015 **Algorithmic Trading**
Contract: Commodities Trading Firm -- Wall Street, New York City
- Responsibilities:** analyze existing trading practices, and develop decision support system for securities trading that utilizes statistical learning principles. Developed system, researched strategies, and executed trades.
- Technologies:** Python, Java, REST APIs, Jupyter Notebook, Anaconda, Scikit-learn, Pandas, Bloomberg Data Services

2004 - Present

Principal Software Engineer, Data Scientist and Owner
Alika Analytics AG -- Ligerz, Switzerland

In my role as a consultant I am regularly hired to lead software engineering projects and/or implement complete solutions. A major component of that work is mentoring engineering team members.

For the companies which specialize in building software products I've been contracted to review engineering practices, recommend process improvements, and mentor engineering improvements.

I have helped lead major engineering change initiatives for companies such as: *Informatica*, *DRW Trading* and *Clarus IPC*. For example, at Informatica I mentored a process improvement project at the program level which consisted of about 400 software engineers.

Summary

- Guided several client software engineering improvement initiatives
- Setup DevOps and Cloud services for development teams
- Mentored several engineering teams on Agile/XP practices
- Assisted clients with management of outsourced projects
- Established quantitative trading team for Wall Street commodity firm
- Implemented machine learning and portfolio management algorithms
- Designed/implemented many client applications (web/database/client-server)
- Designed/implemented point-of-sale systems for retail stores
- Analyzed, automated, and instrumented client business processes

1998 - 2003

Senior Software Architect, Team Lead and Consultant
Self-employed -- Berkeley, California

As a freelancer I was frequently contracted to lead engineering teams and help startup companies to design/implement/deliver new products and product prototypes.

Summary

- ClarusIPC: lead engineering change initiative and presented to VC investors
- NextBus: architect SaaS passenger information and transit operations platform
- NextBus: firmware developer for devices on transit vehicles
- ClarusIPC: architect/team-lead, enterprise VOIP testing product web application
- NightFire: architect/team-lead, enterprise DSL provisioning GIS application
- WindRiver: architect/team-lead for desktop IDE product

Employment History (continued)

1989 to Present

1995 - 1997

Software Architect and Team Lead
Wind River Systems -- Alameda, California

Lead usability improvement initiative for WindRiver's Tornado 2.0 Desktop IDE.

Summary

- Architect/team-lead for desktop IDE for embedded applications
- Implemented component dependency management tool
- Team greatly improved out-of-box experience for the product

1994 - 1995

Software Architect and Technical Trainer
TCSI -- Berkeley, California

Travelled to customer locations to deliver courses in distributed application development and helped review designs for network management products.

Summary

- Implemented distributed telecom network management applications
- Taught telecom software engineers distributed application design

1989 - 1994

Member Scientific Staff
Bell Northern Research -- Ottawa, Canada

This was my first major software engineering position and it was on what was at the time the world's largest realtime software engineering project (4000+ engineers developing the DMS 100 telecom switch).

Summary

- Developed embedded software for telecom switching devices
- Provided architecture guidance for software project

Hobbies and Interests

A few of my interests are: biking, trail-running, hiking, swimming, woodworking, and graphical design.