



**William H. Tihen**  
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## Skills Summary

Subjects: **Computer Science:** introductory through advanced  
**STEAM** – Design, Engineering, Robotics, presentations and copy  
**Mathematics:** algebra through multi-variate calculus & Data Analysis (familiar with R)  
**Physics:** standard physics, electronics and electrical magnetism

Programming: **Most Experience:** Ruby & Rails & Java  
**Some Experience:** Python, JavaScript, R (data analysis)  
**Exploring:** Elixir, Crystal, Pony, Mint, etc. (<https://github.com/btihen/explore>)

Platforms: Linux (CentOS & Ubuntu), MacOS & Windows.

Languages: **English** -- mother tongue  
**German** -- excellent spoken, good written

**Education** **University of Vermont** -- Burlington, VT, USA  
1990 **Master's Degree in Electrical Engineering**,  
*Academic Honor:* Graduate Electrical Engineer of the Year.  
1988 **Bachelor's Degree in Electrical Engineering**,  
*Academic Honors:* Senior Electrical Engineer of the Year, Junior Electrical Engineer of the Year,  
Engineering Honor Society (Phi Beta Kappa), & Freshman Honor Society.

## Experience

2018-now **Garaio REM** - Bern, Switzerland  
**Rails Developer** (*Medea Wagner*)  
• Large codebase for Real-Estate Management – Financial & Rental Management

2007-2018 **Leysin American School (LAS)** – Leysin (VD), Switzerland  
**Teaching and Educational Research** – (*Paul Magnuson, PhD*)

- **Teaching** (STEAM)
  - Coding and Robotics - (after school activity: 7<sup>th</sup> - 12<sup>th</sup> grade)
  - Robot Gardener – Integrated project of robotics and plant biology - (9<sup>th</sup> & 10<sup>th</sup> grade)
  - Boat Design – Integrated project: fluid dynamics, buoyancy, 3-D analytical Geometry & 3-D Printing - (7<sup>th</sup> & 8<sup>th</sup> grade - 13/14 yr olds)
  - Engineering and Robotics - (7<sup>th</sup> & 8<sup>th</sup> grade - 13/14 yr olds)  
<https://ed-gility.github.io/intro-engineering/>
- **Educational Agility/Lean Advocate**
  - Certified Scum Master
    - Scrum Alliance 2019 (taught by John Miller)
  - Video Interview
    - *Agile in Education:* (Interview by Scrum Alliance):  
<https://www.youtube.com/watch?v=cV8UQvNcN9s>
  - Podcast:
    - *Agile in Education at Leysin American School* (interview by Howard Sublet)  
<http://www.solutionsiq.com/resources/agile-in-education-at-leysin-american-school-in-switzerland/>
  - Book Chapter:
    - *Agile and Lean Concepts for Teaching and Learning*,  
Getting Agile at School (Pages 115-132)  
<https://www.springer.com/gp/book/9789811327506>

Articles:

- *Global Insights: The Language & Design of Learning* (04/2018),  
Designed to Float your Boat (Pages 9-12)  
<https://www.ecis.org/research-media-publications/global-insights/>
- *Spotlight: Pulling Agile into Education, Fall 2019*,  
Patient Explanations Lead to Good Things (Pages 6-13)  
[https://resources.finalseite.net/images/v1571421333/lasch/x6zkzvqfmlcpc7rxnljy/Spotlight\\_Magazine\\_2019\\_DIGITAL.pdf](https://resources.finalseite.net/images/v1571421333/lasch/x6zkzvqfmlcpc7rxnljy/Spotlight_Magazine_2019_DIGITAL.pdf)

#### **Blog Articles:**

- <https://www.las.ch/wp-content/uploads/2017/02/introducing-edgility-1.pdf>
- <https://www.agileclassrooms.com/single-post/2015/05/26/Agile-Classrooms-in-the-Alps>
- <https://blog.tieonline.com/pull-vs-push/>
- <https://blog.tieonline.com/roots-of-agile-for-education/>
- <https://blog.tieonline.com/demos-and-feedback-students-learning-from-each-other/>
- <https://blog.tieonline.com/uplift-contextual-exploration-and-building-student-confidence/>
- <https://blog.tieonline.com/the-importance-of-context-challenge-and-exploration-so-students-find-and-build-on-their-own-strengths/>

#### **System Engineer – IT Department** (*Christopher Ott, PhD*)

- **Development**

- Rails (User Facing Services)
- Ruby Scripts (data transformation & exchange via APIs) & a few Python scripts

- **Services**

PostgreSQL, MySQL, LDAP, DNS, Email (Postfix), Apache, Nginx, DHCP, Ansible

- **Hosting Systems**

OpenStack, VMWare, Heroku and IBM Cloud (while in Zurich)

- **Service Systems**

Windows and Linux (Ubuntu and CentOS)

2004-2007 **University of California, Davis** – Davis, CA, USA

**Computer Resource Specialist II** – School of Veterinary Medicine

- Wrote and maintained OpenBSD firewalls.
- Wrote Cyber-Safety checklist & maintain systems (Windows, MacOS & Linux).

2003-2004 **Sacramento Country Day School** – Sacramento, CA, USA

**Java Teacher**

- Advanced Placement (AP) Programming  
all students scored a 5 (the highest possible score) on the AB standardized external assessment

**IT Coordinator**

- Managed school servers (mostly windows) & network.

1999-2004 **The American School in Switzerland (TASIS)** – Montagnola (TI), Switzerland

**IB Mentor / Advisor**

- TASIS didn't offer the IB Computer Science Curriculum, so I was his mentor and advisors for both his Computer Science studies and extended essay.

**System Administrator, Network Manager & Tech Director**

- Internet services (DNS, Webmail, E-mail & Firewall) & Network Management
- Plan educational technology with the administration and business operations.

1998-1999 **The John F. Kennedy School** – Berlin, Germany

**Technology Teacher**

- Classes: Computer Applications, Web & HTML Design

1997-1998 **The American School in Switzerland (TASIS)** – Montagnola (TI), Switzerland

**System Administrator & Network Manager**

- Server, workstation & network security.
- Internet services (DNS, Webmail, E-mail & Firewall).
- Provide technical support for administrators, faculty and students.

- Build & maintain Internet services (DNS, Webmail, E-mail & Firewall).

1993-1997 **Dublin School** - Dublin, NH, USA

***Math & Science Teacher***

- Taught Physics, Mathematics, Computer Literacy & Computer Programming (Java)

***System Administrator, Network Manager******Math & Science Teacher***

- Internet services with FreeBSD, Linux (RedHat) & Windows servers.
- Support faculty and students with Windows & Macintosh workstations.

Internship **Karl Suss**, Waterbury, VT

***Robotics Intern***

Software and Hardware for automated semi-conductor alignment