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EMPLOYMENT EXPERIENCE

- January 2019 – (ongoing)* **Senior Software & Language Engineer** at Surfly in Amsterdam (NL)
Maintained a co-browsing proxy server that parses and re-writes webpage source code in real-time. Used meta-programming techniques to build an environment allowing users to change the way that webpage source code behaves. Built sandboxed re-implementations of browser APIs to preserve user privacy. Investigate and mitigate browser and webserver bugs in implementations of web APIs. Wrote a zero-copy Web-Socket proxy server, the first of its kind. Proposed, and led an initiative to unify developer tooling across multiple platforms, virtualization types, and build workflows. Managed internationalization of all projects across 24 languages. Composed notification sounds and sound font for sonic branding.
- May 2017 – November 2018* **API Engineer** at Snagajob in Richmond, VA (USA)
Built REST backend microservices for a work management and scheduling webapp. Worked in an Agile environment adding features according to user stories. Overhauled time zone and notification behavior across several projects. Reimplemented a software prototype from a local business for nationwide production scale.
- Spring 2015 – Spring 2017* **Freelance Web Developer** in Williamsburg, VA (USA)
Designed, built, and maintained Ruby/Rails webapps and their databases. Evaluated and reviewed research papers for implementation feasibility. Provided technical consultation to local entrepreneurs.
- Summer 2016* **Researcher** at the Software Engineering Maintenance and Evolution Research Unit at William & Mary (USA)
Instrumented Android virtual machines with custom research code. Evaluated research papers on Android software engineering. Built internal tooling for research use.
- Summer 2013 & Summer 2015* **Software & Computer Engineer** at Valeo Service in Newport News, VA (USA)
Designed and built internal software for a warehouse environment. Deployed new software and systems. Maintained company servers. Provided technical support to employees.
- Fall & Spring 2014* **Software Development Intern** at the Global Research Institute¹ at William & Mary
Contributed to data visualization webapps to track international aid funding patterns with AidData.org. Manipulated and interpreted technical papers using machine learning algorithms. Developed text mining processes. Designed and maintained internal software.

EDUCATION

- Fall 2013 – Spring 2017* **The College of William & Mary** in Williamsburg, VA (USA)
Double-major² in Computer Science & Linguistics³
Research experience in computational linguistics and software engineering practices
Cumulative G.P.A. 3.7; *Magna cum laude*; Dean’s List for 5 semesters (of 7 possible)
- Fall 2015* **Universiteit Leiden** in Leiden (the Netherlands)
Semester abroad program with W&M
Courses in Meta-Science, Linguistics, and Social Sciences

¹formerly: Institute for the Theory and Practice of International Relations (ITPIR), see this announcement

²At W&M, a double-major is a self-designed combined study which requires a student to concurrently complete requirements for two different bachelor’s degree programs within their four-year undergraduate period.

³The W&M Linguistics program was nominally part of the English department until 2020. For this reason, my degree shows a Linguistics *concentration* within an *Interdisciplinary Studies* major. Today, the same study would appear as a *Linguistics major*.

TECHNICAL SKILLS AND EXPERIENCE

- Proficient in Python (since 2008), C (since 2013), Javascript (since 2013), Go (since 2014), C# (since 2017), and Z80 assembly (since 2019). Comfortable with Rust, Haskell, Ruby, and Shell scripting. Some experience with C++, Lua, and other assembly dialects.
- Experienced working on both large and small teams, collaborating with a distributed git workflow.
- Comfortable reading/writing language grammars (EBNF/YACC).
- Proficient Web developer. Experience creating RESTful backends using Flask, Django, Rails, Node, and Rocket. Experience with PostgreSQL, MySQL, MariaDB, and MongoDB databases. Some frontend experience with Angular and Vue. Familiar with GraphQL.
- Proficient Linux systems programmer. Specific experience with systemd, early boot, and evdi.
- Active in the open-source software community; see quint.guvernator.net for projects.
- Deeply familiar with the internal workings of web APIs such as WebSockets, Web Workers, Canvas, and HTML5 audio.
- Experienced building, configuring, and maintaining GNU/Linux machines, both professionally and for fun, using various distributions. Experience with Docker/Podman, LXC/LXD/Incus, and systemd-nspawn.
- (2015, 2019–) Participant at *RevSpace*, a hackerspace in Den Haag (the Netherlands).
- Designed sound for short films, theatrical productions, and music side-projects in Ableton Live.
- Executed a technical review of van Baarsen's *GitLab Cookbook* (Pact Publishing, Dec. 2014).

COLLABORATIVE PROJECTS

- Built and programmed the electronic name badge for the 2018 RVAsec security conference using a PIC32MX MCU on a custom circuitboard. Implemented a two-channel wavetable audio synthesizer on the badge and a composition companion app for Linux, both in C. Helped coordinate the twenty-person project over nine months.
- Manufactured made-to-order custom mechanical keyboards for work colleagues using a laser cutter, 3D printer, and reverse-engineered bluetooth chips. Managed the ten-person project over two months.

ADMINISTRATIVE EXPERIENCE

- Board of Directors and Co-treasurer (2020–2021) at *Technologica Incognita*, a hackerspace in Amsterdam (the Netherlands).
- Board of Directors (2017–2018) at HackRVA, a makerspace in Richmond, VA (USA).
- Board Member and User, Small Hall Makerspace in the William & Mary Physics department.