

George “Quint” GVERNATOR V

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EMPLOYMENT EXPERIENCE

- January 2019 – (ongoing)* **Senior Software & Language Engineer** at Surfly in Amsterdam (NL)
Contributed to a co-browsing proxy server that parses and re-writes code on the fly. Tracked down browser and webserver bugs in implementations of web APIs. Wrote a zero-copy WebSocket proxy server. Proposed, built, and deployed internal tooling to unify development across multiple platforms and types of virtualization. Managed internationalization of all projects across fifteen languages.
- May 2017 – November 2018* **API Engineer** at Snagajob in Richmond, Virginia (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, Virginia (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, Virginia (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 Institute for the Theory and Practice of International Relations at William & Mary
Contributed to data visualization webapps to track international aid funding patterns. Manipulated and interpreted technical papers using machine learning algorithms. Developed text mining processes. Designed and maintained internal software.

RESEARCH EXPERIENCE

- Summer 2016* **Software Engineering Maintenance and Evolution Research Unit** at William & Mary
Researching several topics in Android Software Engineering and automated testing. Developing internal tools for scraping and analyzing Android source and instrumenting Android code with research tools.
- Spring 2015* **Sensation and Perception through Augmented-Reality Audio** with the Small Hall Makerspace and the Physics department at William & Mary
Building and analyzing a system for sensory substitution or augmentation using electrical sensors as an artificial organ, augmented-reality audio as a human-machine interface, and a microprocessor development board for signal-processing.
- Summer 2014* **Learning Patterns of Mobile Interface Design** with the Department of Engineering and Sciences at the University of Colorado, Colorado Springs
Studying the effectiveness of machine learning techniques to analyze the quality of Android applications' graphical design.

LINGUISTICS RESEARCH INTERESTS

- Computational linguistics research and development, especially related to cognitive science or computational cognitive modelling
- Theoretical work with perceptual biases and heuristics as manifest in idelect
- Language documentation, analysis, and preservation with an emphasis on community empowerment

COMPUTER SCIENCE RESEARCH INTERESTS

- Programming language development, especially concerning memory safety, thread safety, and strong typing
- Computational linguistics research and development, especially related to cognitive science or computational cognitive modelling
- Developing powerful, flexible tools for computer power users and researchers outside the Software Development community
- Design patterns within concurrent and functional programming

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, Scala, Java, and other assembly dialects.
- Experienced working on both large and small teams, collaborating with a distributed git workflow.
- Proficient Linux systems programmer. Specific experience with systemd, early boot, and evdi.
- 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.
- 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, LXC/LXD, and systemd-nspawn.
- Comfortable reading/writing language grammars (EBNF/YACC).
- Executed a technical review of van Baarsen's *GitLab Cookbook* (Pact Publishing, Dec. 2014).
- Designed test-cases and adapted project specifications for *Data Structures* course at William & Mary.
- Copy edited for *The Flat Hat*, the William & Mary student newspaper.
- Hosted a show at and maintained the website of the *WCWM* student FM and internet radio station.
- Volunteered at and maintained the website of *The Meridian* student coffeehouse.
- Amateur Extra Class licensed in the United States; this is the most permissive radio license and grants all privileges on all US amateur bands. Composed 8-bit music on the Nintendo Gameboy using homebrew software synthesizers mGB & LSDj.
- Comfortable with L^AT_EX.

EDUCATION

- Fall 2013 –
Spring 2017* **The College of William & Mary** in Williamsburg, VA
Majors in Linguistics and Computer Science
Research experience in computational linguistics and software engineering practices
Cumulative G.P.A. 3.7; Dean’s List for 4 semesters
- Fall 2015* **Universiteit Leiden** in Leiden, the Netherlands
Courses in Linguistics, Meta-Science, and Social Sciences
- 2006–2013* **Norfolk Academy** in Norfolk, VA
Advanced courses in French, German, Mathematics, and Music Theory
Graduated with Honors

ADMINISTRATIVE EXPERIENCE

- Member of Dutch hackerspaces *RevSpace* (Den Haag) and *Technologica Incognita* (Amsterdam).
- Board of Directors (2017–2018) at HackRVA, a makerspace in Richmond, VA.
- Board Member and User, Small Hall Makerspace in the William & Mary Physics department.

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.

REFERENCES

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