

Jukka Virtanen

Software Engineer

Email: semisimplemath@gmail.com
Phone: 310-963-0721
Address: 1 Agate Irvine, CA 92614
LinkedIn: linkedin.com/in/jukka-virtanen

ABOUT ME

Mathematics Ph.D. from UCLA with 8+ years of teaching Computer Science as well as 2 years of working as a software developer. Looking to move from academia to industry. A creative, analytical problem solver with the ability to adapt to a new setting and learn quickly. Passion for machine learning.

SKILLS



FREELANCE SOFTWARE DEVELOPMENT

Natural Language Processing - Irvine, CA / June 2022 - Present

- Designed and wrote a natural language processing model that could translate text and email orders from bank customers into options products that they were trying to buy.
- Achieved accuracy of over 99%.

Data Processing and Custom Tool Creation - Irvine, CA / April 2020 - August 2020

- Wrote custom tools for SmartPOC Medical Inc. to identify sequences in the COVID genome that were not present in the human genome.

PROJECTS

Transformer (GPT) - Irvine, CA / December 2022 - Feb 2023

- Wrote from scratch a transformer architecture and used it in several projects.

Poker Bot - Irvine, CA / June 2020

- Created a heads-up no limit Texas Hold 'em poker bot that learns to play from scratch by self-play. Several different methods were used, including deep learning, reinforcement learning and adversarial play. A second approach was done using counterfactual regret minimization, to achieve a game theory optimal model.

Several other projects. See full list at [my github.com/SemiSimpleMath](https://github.com/SemiSimpleMath)

WORK EXPERIENCE

Program In Computing Adjunct Professor - UCLA / Los Angeles, CA / June 2010 - August 2019

- Distinguished teaching award winner.
- Taught C++ courses; internet programming courses (including JavaScript, PHP, SQL, HTML5 and other web technologies.); various mathematics courses (including differential equations and calculus.)
- Managed a complex organization for courses with 150+ students.
- Oversaw teams of 6 teaching assistants that rotated each quarter. Including task assignments and performance reviews.
- Wrote lectures, exams and projects that are still used as model for future courses.
- Did mathematics research and published results in respected journals.

Ph. D. Mathematics
UCLA

B.S Physics
UC Berkeley

B.S. Mathematics
UC Berkeley