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IT Skills Overview

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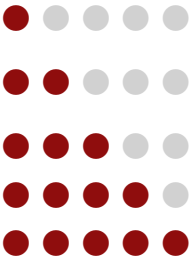

Basic knowledge

Basic knowledge + personal experience in projects

Extensive experience in projects

In-depth expert knowledge

Expert / guru

Used to write executable code in my paper $gg \to t\bar{t}H$ at $\mathcal{O}(\epsilon^2)$

Projects available on GitHub

See table on next page

		Level	Experience in years	Description of use
Other IT skills:	Analytic problem oriented thinking	●●●●○	8	Analytic, problem-oriented approach
	Reformulating problems	●●●●○	7	Reformulating problems to profit from specific strengths of programs/libraries
	Project management	●●●○○	3	
	Machine Learning	●●○○○	1	, Ongoing research project + see Upskilling
Languages:	Wolfram Mathematica	●●●◐○	5	, , Main language
	LaTeX	●●●○○	6	, PhD thesis, multiple presentations, etc.
	Python	●●◐○○	4	, Ongoing research project
	FORM	●●●○○	3	, Computer Algebra System optimized for efficient CPU and RAM usage
	Kira	●●●○○	3	, Linear Equation Solver based on Finite Fields
	Shell Scripting	●●○○○	4	Scripts for automatizing routine tasks.
	Reduze 2.0	●●○○○	2	, Integration by parts solver
	Fermat	●●○○○	2	, Optimized GCD algorithm
	C	●○○○○	1	(read & adjust), University course
	Singular	●○○○○	1	, Optimized algorithms on polynomial rings, e.g., Groebner basis
	Web Development	●◐○○○	1/2	, Personal web page
	LabVIEW	●○○○○	1/2	University course + automatized data aquisition
Frameworks and libraries:	pySecDec	●●●○○	3	, Python library for numeric integration
	pandas	●●○○○	1	, ongoing research project
	Keras, TensorFlow, pytorch	●●○○○	1	, ongoing research project
	numpy	●●○○○	3	, ongoing research project
	FiniteFlow	●●●○○	3	, algebraic operations with rational functions on finite fields
	FIRE6	●●●○○	3	Integration by parts solver, applied in my paper: The H-graph with equal masses in terms of multiple polylogarithms.
Operating systems:	Linux Ubuntu	●●●○○	4	main OS
	Windows 10	●●○○○	9	Personal use
Tools:	Git	●●◐○○	3	All programming projects
	MS Outlook + Calendy	●●○○○	3	