Connor Duncan

website | github | connor@connorduncan.xyz

Motivated, eager and curious Quantitative Analyst specializing in Fixed-Income ETF portfolio management across Treasuries, IG/HY/EM Credit, and Municipal Bonds. Math, Linux and Classical/Jazz Piano enjoyer.

EDUCATION

2022–2023	**UNIVERSITY OF ILLINOIS AT CHICAGO**
	M.Sc. in Applied Mathematics || 3.86/4.0 GPA
2017–2021	**UNIVERSITY OF CALIFORNIA, BERKELEY**
	B.A. in Physics; B.A. in Applied Mathematics || 3.366/4.0 GPA

EXPERIENCE

2023 –

INVESCO
Quantitative Analyst (Fixed Income ETF Portfolio Management)
- ⋄ Developed an interactive, introspectable In-Kind Basket Generation/Portfolio Construction tool, decreasing decreasing basket negotiation times to as short as 5 minutes.
- ⋄ Implemented a position reconciliation tool, notably improving error detection rates and resolution times with data management.
- ⋄ Developed editor plugins for neovim and VS Code adding zero-overhead syntax highlighting and LSP support for Python files containing other languages as string literals (blog post), enabling significant performance and correctness gains.
- ⋄ Prototyped in-house optimizer, using Branch & Bound to minimize continuous and integer objectives with linear/quadratic continuous/integer constraints.
- ⋄ Maintained intra-day flow reconciliation tool ensuring synchronization of basket/trade quantities between our custodian, IBOR and APs.
- ⋄ Managed ongoing transition of front-office systems from Aladdin to Charles River, requiring complete re-sourcing and validation of all data (~ 80 tables).
- ⋄ Migrated DataFrame libraries from Pandas to Polars, enabling anywhere from $2\times$-$100\times$ performance improvements across our ETL.
- ⋄ Spearheaded addition of static type analysis and documentation to critical code.

2022 – 2023

UNIVERSITY OF ILLINOIS AT CHICAGO
Teaching Assistant (Algebra & Business Linear Algebra)

SUMMER 2020

NATIONAL RENEWABLE ENERGY LABORATORY
SULI Intern
- ⋄ Developed React app visualizing environmental policy changes in the LA area.

2018–2020

UNIVERSITY OF CALIFORNIA, BERKELEY; SLAC
Research Assistant, Pyle Group
- ⋄ Administered CentOS Linux Server, developed readout infrastructure for Dark Matter Search detector R&D.

TECHNICAL SKILLS

PYTHON
- ⋄ Polars, SciPy, Flask, Dash, Jinja, threading/multiprocessing, Pydantic, cython.

LINUX
- ⋄ Self-hosted websites using both apache and nginx, as well as a mail server.
- ⋄ Daily Arch Linux user since 2018, more comfortable in tmux than Windows.

OTHER
- ⋄ By expertise ($\downarrow$): (n)vim, SQL, git, LaTeX, JavaScript, Bloomberg, Atlassian, GitHub, Rust, Aladdin, MATLAB, lua, Axioma, C/C++, Redis, R, Excel.

/ETC

INTERESTS
- ⋄ AT WORK: Mixed Integer Programming, Linux, Data Science, Dev Tools, Numerical Analysis of PDEs.
- ⋄ AFTER WORK: Piano, Travel, Science Fiction, blogging.[a]

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[a]This link will work if my site was blocked by your firewall. The .com domain is taken!