JAN SILA

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EDUCATION

Charles University, Prague, CZ — Expected 23/24
Ph.D., Economics and Finance
Thesis: Modern portfolio and risk management methods

Visiting scholar
University of Auckland, Auckland, NZ — Jan 23 - Apr 23
University of California, Berkeley, US — Sep 22 - Dec 22

Charles University, Prague, CZ — 2011-2017
MSc., Financial Mathematics and Computation (Graduated with Distinction)
Thesis: Minimization of Expected Shortfall under α-Levy distributions

University of Leicester, Leicester, UK — 2015-2016
MSc., Financial Mathematics and Computation (Graduated with Distinction)
Thesis: Benefits of denoising of the covariance matrix for portfolio construction

WORK EXPERIENCE

Second Foundation | Quant analyst — June 2023 - now
Predicting outcomes in electricity markets.

Searpent | Software developer — Oct 2017 - Apr 2020
· Developed a machine-learning data ETL pipeline that extracted features of crashed cars and searched for duplicates across the database of images and insurance claims. · Performed setting up of the Convolution Neural Network model for segmenting and labeling parts of a car.
· Separately, my team developed an app for automatized underwriting and claim reporting process.
· *Tech stack:* Python (scikit, keras, OpenCV, Tensor Flow), Docker, RabbitMQ, AWS (EC2, Lambda), SQL and non-SQL databases (PostgreSQL, DynamoDB), REST API

Freelancer | Data scientist — Oct 2016 - Oct 2017
· Designing and implementing econometrics and image processing models.
· One of the main projects included visually scoring a leaflet for a major staples retailer.
· Developed and trained visual recommender for furniture aggregator, which led to creating Searpent company I joined later on.
· *Tech stack:* Python (OpenCV, Django), Docker

ACHIEVEMENTS

GEOCEP scholarship	EU HORIZON 2020 grant for visiting scholars, Fall 2022-Spring 2023
Best Course taught at Economics Institute	Data Processing in Python, CUNI, SS 20-22
Best Thesis Award	Award for the best thesis in the year, UoL, 2016
Deloitte Applied Analytics Winner	Mathematical modeling competition, Prague, CZ, 2016, 2017
KPMG International Case Competition	Management consulting and data analytics, Prague, CZ, 2015

SKILLS

Python	**Expert**	About 7 years of experience and knowledge of general programming, econometrics, machine learning and data science libraries (Statsmodels, Scikit-learn, Pandas, Numpy, Keras and many others) and an open-source contributor. Experience in deploying python API as Flask and Django frameworks. Since 2020 I lecture *Data Processing in Python* course at Charles University, which is regularly awarded as one of the top courses in the summer term.
JavaScript	**Proficient**	About 2 years of experience using Node, ReactJS, and jQuery for multiple projects as a part of full-stack applications of websites. Experience with creating and maintaining backend NodeJS packages.
R	**Proficient**	Mainly used for time series analysis and data wrangling. Familiar with *dplyr*,*rugarch*, *forecast* or *shiny* apps.
CI/CD	**Proficient**	Several years of experience using Continuous Delivery and Continuous Integration in development and automated deployment systems such as GitLab and GitHub Pipelines or Jenkins. I am accustomed to writing my own tests for my Python and Node modules.
DevOps	**Proficient**	Although I am strongly oriented towards serverless architecture, setting up a UNIX server as small as RaspberryPi from scratch is no issue for me. My server side is usually orchestrated with docker-compose.
Mobile (iOS)	**Basic**	Developed a prototype for a physio exercise app for phones with ReactNative, which was not funded, but I got a chance to familiarize with basics of creating iOS apps.

LANGUAGES

English	**Fluent**	Took part in several international conferences and taught several classes and produced a number of research articles in English. IELTS 8.5 (*2015*)
French	**Basic**	Basic understanding of written text, average speaking skills. Aiming to improve
Czech	**Native**	

SELECTED PUBLICATIONS

Michael Mark, **Jan Sila**, and Thomas A. Weber. Quantifying Endogeneity of Cryptocurrency Markets. Euro- pean Journal of Finance, 28:8:784–799, 2022b. doi:10.1080/1351847X.2020.1791925. [Open Access]

Jan Sila, Michael Mark, and Ladislav Kristoufek. On Empirical Challenges in Forecasting Market Betas in Crypto Markets. Working Papers 2022/19. Charles University Prague, Faculty of Social Sciences, Institute of Economic Studies, 2022.

Jan Sila, Evzen Kocenda, Ladislav Kristoufek and Jiri Kukacka. Good vs. Bad Volatility: The Dichotomy and Drivers of Connectedness in Major Cryptocurrencies. Working Papers 24/2023. Charles University Prague, Faculty of Social Sciences, Institute of Economic Studies, 2023.