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| Balazs VargaGraphical user interface, text, application  Description automatically generated  **Data Scientist in St. Louis, MO** | | | | | |
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| I care about solving problems that promote our general capabilities to do science more efficiently, with a special focus on medical sciences. | | | | | |
| **LANGUAGES**  **• Python**  **• pgSQL** |  | **FRAMEWORKS**  **• Pandas**  **• Scikit-learn** |  | **DATABASES**  **• pgAdmin** | **TOOLS**  **• Jupyter**  **• Matplotlib**  **• Scikit-learn** |
| **PROJECT EXPERIENCE** | | | | | |
| Exploratory Data Analysis on Cryptocurrency and Stock Market Data — CG-STL, Data Science Course — 2021  * Examined correlations as well as rolling correlations between different asset classes | | | | | |
| **WORK EXPERIENCE** | | | | | |
| Postdoctoral Research Associate — UHSP, Saint Louis, MO, August 2018 - Present  * Performing pioneering chemistry and pharmacology studies to determine the structural basis for biased signaling at the opioid receptors. This work includes designing and synthesizing ligands and proposing mechanistic hypotheses on biased GPCR signaling. * This work will prove critical to determining the structural basis for biased signaling in GPCRs in general and enable rational design of safer and more effective drugs for a wide variety of indications.  Research Director — Eszterhazy Karoly University, Eger, HU, September 2015 - June 2017  * Collaborated to set the strategic directions of the newly formed Wine and Grape Research Centre as well as managed a team of 3 people to write grant proposals. * To better align the research to the needs of the wine industry, I initiated contact with local representatives that led to several collaborative projects. * To increase the performance of scientific staff I designed „journal clubs” focusing on the most recent literature in wine sciences.  Research Accociate — Hungarian Academy of Sciences, Budapest, HU, November 2013 - August 2015  * My work on cyclooctynes resulted in the development of a novel cyclooctyne based click chemistry tool named COMBO, which featured improved kinetics and diminished lipophilicity in comparison with the existing tools in the field and which allowed the successful labelling of artificial organelle-like compartments in living cells – the first such successful experiment of its kind * Developed hydrophilic *trans* cyclooctenes for incorporation into non-canonical amino acids with [Dr. Kele](http://chembiol.ttk.mta.hu/) * Oversaw the work of a BSc and a MSc student, which in both cases resulted in the highest grade (5)  Visiting Scholar — Harvard Medical School, Boston, MA, September 2012 - October 2013  * Designed and synthesized novel hydrophilic *trans* cyclooctenes for in vivo imaging in the laboratory of Dr. Hilderbrand * Developed a highly efficient non lipophilic click chemistry tool, which was successfully used in fluorescent labelling of intracellular proteins, with much decreased wash-out time of excess reagent  Teaching/Research Assistant— Dartmouth College, Hanover, NH, September 2011 - September 2012  * Supervised Organic Chemistry Honors Session laboratory courses * Developed a new methodology for the P-stereogenic enantioselective synthesis of phosphiranes with [Professor Glueck](https://glueck.host.dartmouth.edu)  Research Assistant— ELTE and University of Regensburg, Buda, HU and Regensburg, DE, 2008 - 2011  * Participated in the development of a novel FRET system to detect molecular beacon formation * Designed and synthesized a new strained cyclooctyne derivative (COMBO) with superior reactivity for in vivo biorthogonal imaging | | | | | |
| **EDUCATION** | | | | | |
| CG-STL, Data Science Course — 2021ELTE, PhD Summa cum Laude, Organic Chemistry — 2015Dartmouth, MS in Organometallic Chemistry — 2013 | | | | | |