Ladislav Vrbsky

linkedin.com/in/vrbsky | github.com/vrbsky
vrbsky.com | ladislav.vrbsky@gmail.com
Belém, PA, Brazil

MS in Computer Science, AI and Software Engineer.

Experience

- **Software Developer - Web** Oct 2017 – Present
  Vibe Desenvolvimento (SW dev. company) [C#, Java, SQL Server, ASP.NET, JSF, JSP, AngularJS, JS, SVN]
  Internet banking web apps, management systems, web services for a state bank Banpará
  - Developed, improved, maintained new and legacy systems (mostly back-end)
  - Boosted 3x tech support speed by by improving automation tool (for 1 frequent issue)
  - Crushed high-impact bugs in production
  - Reduced from hours to minutes solutions of some team tasks by knowledge of new and legacy systems
  - Used web services, REST
  - Worked in small teams, collaborated with technical requirements team

- **Applied Artificial Intelligence Researcher** (CAPES scholarship) Jan 2016 – Apr 2018
  Operational Research Lab (Electrical Engineering faculty lab) [Matlab, LaTeX, Git]
  Smart power grid communication optimization research through cell positioning - Related to MS Thesis
  - Developed a model that calculates communication delay in network
  - Implemented a clustering-based topology chooser for wireless networks
  - Compared k-means performance of >50 model configurations
  - Master's thesis: *Clustering-driven equipment deployment planner and analyzer for wireless non-mobile networks applied to Smart Grid scenarios*
  - Open-sourced the model on GitHub - usable by utility companies

- **Junior Software Developer** Apr 2013 – Aug 2014
  AgentFly – Agent Technology Center (Commercial/university startup) [Java, XML, CVS]
  Large-scale multi-agent project, that models and simulates air traffic control
  - Implemented event-oriented collision avoidance protocol for drones, a.k.a. UAVs
  - Optimized heuristic of route generation by extrapolating the collision-based utility values
  - Analyzed 4 heuristics of route generation w.r.t. computational and communication costs, and 4 other metrics

Projects

- **AI projects**: YOLO object detection (Darknet), Transfer learning (Tensorflow), color quantization (Matlab)
- **Fraud detection in energy network** (team): Neural Networks, Decision Trees, Fuzzy Logic, Genetic Algorithm
- **Memetic algorithm for Traveling Salesman Problem**: Genetic Algorithm with local search
- **JavaScript 2D web games**: Platform Adventure (team), Helicopter Attack, Asteroid Crush

Computer Science Skills

- **Languages**: Java 3yrs, C# 1yr, C/C++ 1yr, Matlab 3yrs, Python 1yr, JavaScript, SQL, HTML | **EN**, **PT**, **CS**, DE
- **Techniques**: Clustering, Neural Networks, Genetic Algorithms, Decision Trees, Graphs, Probability
- **Interests**: TensorFlow, PyTorch, SciKit-Learn, Reinforcement Learning, Computer Vision, Natural Language Processing, Problem Solving, Cyber Security

Publications

- **ICNSC 2017 (Intl. Conference)**: *Clustering techniques for data network planning in Smart Grids*
  Determines deployment positions of Base Stations in a network
  Compares performance of clustering algorithms in this application
- **To be published (Peer Reviewed Journal)**: [name not yet defined]
  Two-Level clustering – Optimal deployment study of network Access Points and Gateways
  Open-sourced on GitHub

Education

- **Federal University of Pará (UFPA)** | GPA 3.889 Belém, PA, Brazil
  MS – Applied Computing – Artificial Intelligence Mar 2018

- **Kansas State University (KSU)** | GPA 3.692 (undergrad. & grad. combined) Manhattan, KS, USA
  MS period – Computer Science (intl. exchange studies) Aug 2014 – May 2015

- **Czech Technical University in Prague (CTU)** | GPA 3.007 Prague, Czech Republic
  BS – Computer and Information Science Jun 2014