

Ladislav Vrbský

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Belém, PA, Brazil

MS in Computer Science, AI and Software Engineer.

EXPERIENCE

- Web Developer – Back-End / Full Stack** Oct 2017 – Present
 - Vibe Desenvolvimento** (SW dev. company) [C#, Java, SQL Server, ASP.NET, 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 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)** Jan 2016 – Apr 2018
 - Operational Research Lab** (Electrical Engineering faculty lab) [Matlab, L^AT_EX, GitHub]
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