Ladislav Vrbský

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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, 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, 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