Ladislav Vrbský

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Belém, PA, Brazil

MS in Computer Science, SW developer, AI enthusiast.

Experience

- **Web Developer – Back-End / Full Stack** Oct 2017 – Present
  Vibe Desenvolvimento (SW dev. company) [C#, Java, ASP.NET, SQL, JavaScript, SVN]
  Internet banking web apps, internal systems, web services for a state bank Banpará
  - Developed, improved new upcoming systems and legacy systems in production
  - Performed under pressure on high-impact production bugs
  - Analyzed system errors, both in code and in databases
  - Used web services, REST, SOAP frequently
  - Juggled multiple tasks at once
  - Worked in small teams, new projects in close collaboration with technical requirements team
- **Applied Artificial Intelligence Researcher** Jan 2016 – Apr 2018
  Operational Research Lab (Electrical Eng. university lab) [Matlab, LaTeX, GitHub]
  Smart power grid communication optimization research through cell positioning
  - Developed a model that optimizes deployment of Access Points and network Gateways
  - Open-sourced the model on GitHub - usable by utility companies
  - Master's thesis: *Clustering-driven equipment deployment planner and analyzer for wireless non-mobile networks applied to Smart Grid scenarios*
  - Used clustering techniques to research communication QoS in Smart Grids
  - Compared clustering techniques for Base Stations deployment with respect to QoS in 1st publication
- **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 collision avoidance protocol for unmanned aerial vehicles (UAVs)
  - Optimized generation of alternative airplane routes by extrapolating collision probability
  - Developed communication skills by interacting and working closely with the CEO

Projects

- **Fraud detection in energy distr. network**: Neural Networks, Decision Trees, Fuzzy Logic, Genetic Algorithm
- **Small AI projects**: MNIST digit classification (TensorFlow), color quantization (Matlab)
- **Memetic algorithm for Traveling Salesman Problem**: Genetic Algorithm with local search
- **JavaScript 2D web games**: Platform Adventure (in team), Helicopter Attack, Asteroid Crush

Programming Skills

- **Languages**: Java 3yrs, C# 1yr, C/C++ 1yr, Matlab 3yrs, Python 1yr, JavaScript, SQL, HTML
- **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)** Belém, PA, Brazil
  MS – Applied Computing – Artificial Intelligence Mar 2018
- **Kansas State University (KSU)** Manhattan, KS, USA
  MS period – Computer Science (intl. exchange studies) Aug 2014 – May 2015
- **Czech Technical University in Prague (CTU / ČVUT)** Prague, Czech Republic
  BS – Computer and Information Science Jun 2014