Ladislav Vrbský

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EXPERIENCE

- **Web Developer – Back-End / Full Stack**   Oct 2017 – Present
  Vibe Desenvolvimento   [C#, ASP.NET, Java, SQL, JavaScript, SVN]
  - Web applications for a local state bank Banpará – Internet Banking apps and internal management systems
  - Implementing new projects/functionalities - existing legacy systems in production and new systems
  - Frequent use of web services
  - Maintaining existing legacy systems
  - Tech support: Critical error / bug fixes and analysis, and related issues
  - Building new web applications
  - Usually working in small teams or individually
  - Close collaboration with technical requirements team

- **Researcher – Applied Computing**, (part-time)   Jan 2016 – Present
  Operational Research Lab   [Matlab, LaTeX]
  - Researching communication QoS in Smart Grids using clustering techniques
  - 1st publication compared clustering techniques for Base Stations deployment with respect to QoS
  - Master's thesis: *Clustering-driven equipment deployment planner and analyzer for wireless non-mobile networks applied to Smart Grid scenarios*
  - Developed a model that optimizes deployment of Access Points and network Gateways
  - Model usable by utility companies, available as open-source on my GitHub

- **Junior Software Developer**   Apr 2013 – Aug 2014
  AgentFly - Agent Technology Center   [Java, CVS, XML]
  - Large-scale multi-agent project, that models and simulates air traffic control
  - Implemented collision avoidance algorithm for unmanned aerial vehicles (UAVs)
  - Optimized generated alternative airplane routes
  - Developed communication skills by interacting and working closely with supervisor

PROJECTS

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

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
- **In progress (Peer Reviewed Journal)**: [name not yet defined]
  Two-Level clustering - Optimal deployment study of network Access Points and Gateways
  Open-Sourced on my GitHub

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, SciKit-Learn, Natural Language Processing, Computer Vision, Reinforcement Learning, Problem Solving, Cyber Security

EDUCATION

- **Federal University of Pará (UFPA)**   Belém, PA, Brazil
  Master of Science in Electrical Engineering – Applied Computing – Artificial Intelligence   Aug 2015 – Mar 2018

- **Kansas State University (KSU)**   Manhattan, KS, USA
  Computer Science (MS and PhD level) courses – International Exchange   Aug 2014 – May 2015

- **Czech Technical University in Prague (CTU)**   Prague, Czech Republic
  Bachelor of Computer and Information Science   Aug 2011 – June 2014