

Highlights

- Prog. Languages: C (5+ yrs), Python (3+ yrs), Java (3+ yrs), MATLAB (Simulink) (5+ yrs), R (2 yrs), Processing (2yrs), SQL(4+ yrs), PLC(2 yrs)
- Doc. Editing: Word/PPT/Excel, Pages/Numbers/Keynote, LATEX
- Mechanical Design: AutoCAD (6 yrs), Solidworks (5+ yrs)
- Mechanical Skills: MakerBot 3D print, Laser cut, Mill, Drill, Lathe Machine.
- Statistics Softwares: STATA, SPSS
- Database Softwares: SQL Server (4 yrs), Navicat (2 yrs)
- Operating Systems: Windows 7/10, OS X

Experience

Company Name June 2016 to Current R&D Product Development Engineer

City

- Design and build a tail-sitter VTOL(vertical take off and landing) UAV(unmanned aerial vehicle) which.
- takes off and lands vertically and travels horizontally.
- Main duties include but not limit to aerodynamics.
- modeling, UAV control system design, mechanical manufacturing, simulation and tuning/experiments.

Company Name May 2015 to February 2016 Research assistant

City

- Research assistant for Wharton School environment economics projects on Europe Emission Trading.
- System (EU ETC).
- Main duties include large scale data collecting, cleaning, merging, database.
- construction and data analysis, etc.
- Completed with skills ranging from Java, python, Navicat SQLite.
- database software) and STATA (data analyzing software).

Company Name August 2013 to September 2013 Mechanical Technician

City

- Check, report on reducer components, automobile chassis producing, processing and assembly line.
- Trained in mechanical manufacturing fundamentals in industrial production of automobiles.
- Mechatronics & Robotics: Experienced in designing and building Mechatronic systems and Robots, including self-balanced vehicle and autonomous hockey-playing robots (more info: www.robokey.com), etc.
- Familiar with embedded system, especially Arduino micro-controller.
- Highly efficient in C and assembly language programming on autonomous systems.
- Solid knowledge and practices in Robotics and Kinematics.
- Participate in projects on planning robot trajectory of PUMA 260 robot arm long-exposure light painting and Haptic Rendering and Motion Control with the Phantom Robot.
- Mechanical Engineering Experienced in mechanical CAD softwares(6 yrs).
- Undergraduate thesis focuses on "Mechanical Design of a Flexible-Assembly-System(FAS) for tubes" which is fully designed and analyzed in AutoCAD and Solidworks.
- UAV & Quadrotor: Solid knowledge on quadrotor dynamics, motion planning, graph search, trajectory planning.
- Hands-on projects on Dynamic Modeling, Control and Simulation of an Autonomous Quadrotor, including simulation, 3D Path Planning against obstacles using Dijkstra and A* algorithms, Trajectory Generation and Control and Lab Experiments with KMe1.
- Plenty amount of practices on implement Kalman Filter, Extended Kalman Filter on real system with uncertainty.
- Computer Vision: Study on camera model, projective geometry, optical flow and RANSAC (Random Sample Consensus) in scene analysis and automated cartography.
- Projects on vision based robot pose (position, roll/pitch/yaw angles) estimation; velocity estimation based on optical flow; implementing Error State Kalman Filter to eliminate real system noise.
- Control System Study on Feedback Control systems including Laplace transformation, transform function, block diagram, PID control, Bode Plot, Root Locus, Frequency Response and Stability Robustness.
- Research on Ping-Pong ball position control by PIXY camera and smart transporting project of avoiding multi-vehicles crash involving study on "string stability".
- Machine Learning Experienced in Supervised Learning (Regression, Decision Tree, Neural Networks, KNN, SVM, Naïve Bayes Classifiers), Unsupervised Learning (Clustering, PCA, Matrix Factorization), etc.
- Trained a learning model combining Logistic Regression (LASSO), Linear SVM, intersection kernel SVM and Adaboost to predict tweeter users' gender by their tweets, profiles and graphic information.
- Programming Efficient on Python and Java with a variety of hand-on projects involving exercises of data structure, algorithms, GUI.
- Good programming habits including unit test, test driven development (TDD).
- 5+ years of expertise in C language and Matlab with projects about simulations, analysis and tool- making in mathematic, mechanical and electrical areas.

Education

University of Pennsylvania, School of Eng. and Applied Science Aug, 2014 Master of Science : Mech. Eng. & Applied Mechanics Jun City , State
Mech. Eng. & Applied Mechanics Jun

Harbin Institute of Technology (HIT) 2010 Bachelor of Science : Mechanical Design and Automation Sep Aug City , China Mechanical Design
and Automation SepAug

Languages

English, Chinese

Additional Information

- COMPETITIONS & AWARDS: Honor Mention Prize (30%), MCM: The Mathematical Contest in Modeling 2011 Regional Second Prize, China Undergraduate Mathematical Contest in Modeling 2012 4th Place, Robockey, Hockey-playing Robot competition at Upenn 2015

Skills

3D, assembly language, AutoCAD, automobiles, C, C language, CAD, Chinese, Clustering, com, controller, data analysis, Database, database software, designing, economics, Editing, embedded system, English, Experiments, GUI, graphic, Java, Laser, Lathe, Machine Learning, MATLAB, Mechanical, Mechanical Design, Mechanical Design, Mechanical Engineering, Excel, Windows 7, Word, Mill, Modeling, Networks, Neural, Operating Systems, OS, painting, camera, PLC, predict, producing, Programming, Python, Rendering, Research, Robotics, Simulation, Solidworks, SPSS, SQL, SQL Server, STATA, Statistics, system design, Trading System, vision