resume\_115@gmail.com  
(540) 997 9809  
 Ph.D.  
South Royalton VT - Email me on Indeed: indeed.com/r//e910c60b19bcf799  
Experienced Algorithm Researcher and Developer in estimation and filtering hybrid system modeling multisensor data fusion automated reasoning and uncertainty management for target tracking and machinery diagnostics and prognostics  
Hardware and Software Developer with three years of experience in developing embedded systems for signal acquisition and signal processing  
WORK EXPERIENCE  
Senior Research Scientist  
Sentient Corporation - March 2006 to June 2012  
Lead investigator in SBIR programs sponsored by NASA NAVAIR and ARMY to develop reasoning and uncertainty management algorithms for condition-based maintenance systems  
 Developed a model updating architecture in online aircraft prognosis systems  
 Developed an automatic reasoner prototype for using operational usage and maintenance data to determine remaining useful life and required actions  
 Developed decision and data mining algorithms for an automated intelligent maintainer support system for LAV-25  
 Developed the uncertainty management algorithms for aircraft prognosis systems  
 Investigated and developed uncertainty quantification methods for the fatigue crack initiation prediction tool for rotorcraft spiral bevel gear  
 Developed vibration based diagnostic algorithms in C/C++ for diagnostics for Black Hawk hanger bearings Extensive experience in writing successful SBIR and STTR proposals  
 Prepared and delivered technical presentations to clients and international conferences  
Graduate Research Assistant  
University of New Orleans - 2000 to 2006  
Developed the optimal dynamics model set designs for maneuver target tracking  
 Developed a semi-parametric modeling scheme for linear regression model selection  
 Developed the best linear unbiased filter for target tracking with nonlinear measurements and sensor fusion Proposed new performance metrics and tests to assess estimation/filtering algorithms  
Research Internship  
Intelligent Automation Inc - Rockville MD - July 2005 to December 2005 Developed a joint classification and estimation method to E-nose sensor array  
 Created ontology for a battlefield information management system Research Assitant  
Automation Institute - Xi'an Jiaotong University P.R.China - 1997 to 2000  
 Developed a signal generator for a testing rig for mechanical fault diagnosis  
 Developed the software for a no-contact smart card reading system  
 Developed the signal processing hardware of an innovative stereoscopic display system  
   
EDUCATION  
PhD in Stochastic signal processing and data fusion  
University of New Orleans - 2000 to 2006  
MS in System control  
Xi'an Jiaotong University - 1997 to 2000  
New Orleans LA  
Xi'an P.R.China  
BS in Electrical Engineering  
Xi'an Jiaotong University - Xi'an P.R.China 1993 to 1997  
SKILLS  
C/C++(+5 Years) Matlab(+12) Python(+3) Intel assemble language (1+);  
AWARDS  
Third place in Challenge Problem Competition in International Conference on Prognostics and Health Management 2008 in professional group  
September 2008  
Electrical Engineering Chevron Graduate Student Award  
June 2005  
ADDITIONAL INFORMATION  
SPECIALTIES  
Modeling  
Linear systems Time series Maximum entropy modeling Gaussian mixture Hidden markov model Hybrid systems Bayesian network Graphical model  
Estimation/Filtering  
Classical and Bayesian parameter estimation Least-squares estimation Kalman filter Unscented Kalman filter Particle filter Adaptive filter Expectation maximization algorithm  
Classification and Detection  
Neural network Support vector machine Decision tree Neyman-Pearson test Generalized-likelihood ratio test Bayes test Sequential test Minimax test CUSUM  
detection  
Information Fusion and Reasoning  
Fuzzy logic Dempster-Shafer evidence reasoning Bayesian inference Least-squares fusion  
Uncertainty Quantification  
Monte Carlo simulation KarhunenLoe՗ve expansions Stochastic adaptive sparse grid method  
Signal Processing  
Digital filter design Time-frequency analysis Vibration signal analysis Acoustic signal analysis  
Control Theory  
System identification Feedback control Modern control Adaptive control Optimal control  
Programming Skills  
Matlab (12+ years) C/C++ (5+) Python (3+) Assemble language (3+) Mathematica (2+) SAS (1+)  
Field Bus RS-232 RS-485 I2C  
Microcontroller [...] 89c51