NATHAN SAKAL

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WORK EXPERIENCE

Aircraft Performance Engineer   June 2017- Present
Automated Systems in Aircraft Performance   Pittsburgh, PA

- Create new Fortran DLLs to parse incoming aircraft performance data
- Optimize algorithms that inform pilots of maximum payload based on current weather conditions and airport characteristics (obstacle clearance, runway length, etc.)
- Design, develop, and maintain a user interface for use in cockpits and dispatch offices using ASP.NET, VB.NET, and Objective- C
- Utilize internal APIs allowing front end – back end communication via XML and JSON
- Retrieve relevant business partner data through external API calls
- Maintain and optimize SQL databases and queries that contain airport, aircraft, and airline data that drive the application's functionality
- Manage a team by distributing work based on skillsets, providing feedback, and performing code review
- Interface directly with clients to provide time and cost estimates based on business needs
- Administer all user permissions, SSL, server functionality, application hosting, and other company resources
- Analyze performance data using VBA to generate client facing reports

Systems Administrator and Design Engineer   February 2017 – June 2017
Solid Dynamics   State College, PA

- Created an efficient and ergonomic 3D printing farm design with CADD
- Utilized a homegrown software to supervise large scale 3D printing
- Performed network administration for over 100 3D printers
- Assembled and maintained all 3D printers

EDUCATION

The Pennsylvania State University, University Park, PA   August 2013-May 2017

- Bachelor of Science, Aerospace Engineering
- Penn State Sigma Gamma Tau, Aerospace Engineering Honor Society
- Worked on research involving the study of ice adhesion on specific airfoil coatings

ADDITIONAL EXPERIENCE

- Extensive experience with MATLAB, LabView, and CADD
- Some coursework in C++ and Linux
- Certified in Analytical Graphics' System Tools Kit Software (Astrogator and orbital analysis)
- Software Engineering Testing: Head of the testing team to successfully launch a surveillance weather balloon, meeting the specifications set forth by the requirements team