

## Matthew Travis

4315 Park Ave, APT 6A, Union City, NJ 07087  
matthew.travis@aresinstitute.org  
(321) 289-0872

December 1, 2017

I am an aerospace and software engineer with extensive experience working for high-technology startups across diverse industries. I am skilled in propulsion system and launch vehicle design, ground test systems, safety and operations. In my most recent position, I have managed business-related corporate affairs and lead the workforce in an extremely fast-paced environment to achieve the company's goal to bring to market a nanosatellite launch service. My role is divided between corporate responsibilities and being deeply involved in the technical work as a member of the company's engineering team.

### Work Experience

**Dates:** 2016 – Present

**Company:** Aphelion Orbitals, Inc.

**URL:** <http://www.aphelionorbitals.com>

**Location:** Union City, NJ

**Position:** COO

**Responsibilities:**

As co-founder and COO of the company, I lead a team of 10 employees developing a nanosatellite launch vehicle, propulsion system and a line of cubesat components. I manage all of the corporate affairs on behalf of the Board of Directors including HR, taxes, payroll, legal compliance and ITAR/export compliance. I am the primary POC for vendors, media and government agencies. I am actively involved in engineering design of our propulsion system and launch vehicle hardware and software.

During the past three years, I have led the team at Aphelion Orbitals, Inc. as co-founder and COO. During this time, I managed 10 people designing a nanosatellite launch vehicle and new propulsion system. Under my leadership, we successfully demonstrated a flight-scale rocket engine utilizing a propellant mixture that has never been used commercially before. We accomplished this in an intense program starting from a blank design to test firing a production engine in only 13 months. As a member of the entrepreneurial team, I worked with the other founders to close our Seed Series funding round in 2017 and have pitched for additional funding in the time since. In my COO role, I negotiated employee health insurance, business licensing in multiple states and ITAR/export compliance. I personally selected every employee that we hired and have been extremely proud of their work and commitment.

**Skills:**

- Rocket propulsion design (RPA, Propep, ANSYS)
- Launch vehicle design and simulation (ASTOS, STK, GMAT)
- Liquid and solid fuel propulsion system testing

- High-pressure gas and fluid management
- Ground and flight safety analysis
- ITAR and Export Compliance
- Fortran
- Matlab/Simulink
- LabView
- Ansys
- Autodesk Inventor
- Python
- C++ / Microsoft Visual Studio
- Adobe Creative Suite
- Microsoft Office
- Business plan and pitch deck writing
- Payroll and human resources
- Business legal compliance

**Dates:** 2003 – Present

**Company:** Aerospace Research & Engineering Systems Institute, Inc.

**URL:** <http://www.aresinstitute.org>

**Location:** Union City, NJ

**Position:** Executive Director

**Responsibilities:**

I manage the programs for an aerospace-oriented 501 (c)(3) non-profit research organization. Our projects include development of an experimental cubesat and solar sail propulsion, "green" propulsion for cubesats and research into non-toxic, environmentally-friendly chemical propulsion for launch vehicles. Our programs support STEM education and we provide internship and other opportunities for outstanding students.

**Skills:**

- Cubesat design and assembly
- Cubesat flight software and avionics programming
- Mission simulation (STK, GMAT, etc)
- Rocket Propulsion Design (RPA, Propep, ANSYS)
- Fortran
- Matlab/Simulink
- Autodesk Inventor
- Python
- C++
- Microsoft Visual Studio
- Adobe Creative Suite
- Microsoft Excel
- Microsoft PowerPoint
- Write and publish content items, including images and video, to company's websites

- Develop streaming media and multimedia features, live and recorded, for publication on the World Wide Web

**Dates:** 10/2000 – 03/2001

**Company:** Veritas Software

**Location:** Orlando, Florida

**Position:** Programmer/Analyst

**Responsibilities:**

Responsible for creation of web applications using Java, JavaScript, HTML, DOM, Active Server Pages and J2EE. Assisted in the development of system requirements and design using UML. Participated in design and development of applications to manage data stored in MS SQL Server and Oracle databases. Administered MS SQL Server databases. Lead development of sales and workflow management applications on the web.

**Dates:** 02/1999 – 08/2000

**Company:** The Systems House, Inc.

**Location:** Des Plaines (Chicago), Illinois

**Position:** Programmer/Analyst, E-Commerce

**Responsibilities:**

Lead a team that developed online sales applications generating more than \$20 million in annual revenues for the company. Held a lead role in the development of new business-to-business applications and business-to-consumer applications that enabled the company to expand its customer base. Developed object-oriented Java, C++ and XML based web-enabled applications. Responsible for integration of real-time e-commerce systems with MS SQL Server 7.0, Access and UniData databases. Programmed server-side scripts using VBScript and Active Server Pages. Created modular applications with inter-process communications with each other and a database application server on the server. Architected applications using UML, Database schema and XML schema. Created transaction processing components with Visual Basic. Conducted research and development in using XML-based technologies for advanced e-commerce solutions, including applications for Electronic Data Interchange, flexible UI development, and document and data management.

**Dates:** 06/1997 - 11/1998

**Company:** University of Illinois

**Location:** Urbana-Champaign, Illinois

**Position:** Staff Programmer

**Responsibilities:**

Developed web based educational applications for the College of Agricultural, Consumer and Environmental Sciences. Served in a lead role in the development of JavaBeans components for online applications. Engineered application development using Perl, SQL and Java. Created Java-based user interfaces for the applications using AWT and Swing. Developed

applications for staff to manage curricula, testing and student records. Responsible for design and implementation of MySQL, MS Access and MS SQL Server databases

**Dates:** 08/1995 - 1/1996

**Company:** National Center for Supercomputing Applications

**Location:** Urbana-Champaign, Illinois

**Position:** Programmer

**Responsibilities:**

Developed applications in C++ and Java. Create shared libraries in C/C++ that were callable from Java, in support of the Habanero object-sharing and collaboration project. Performed debugging and Q.A for the NCSA Mosaic web browser development team.

## **Education**

**Dates:** 6/1993 - 8/1997

**School:** University of Illinois

**Location:** Urbana-Champaign, IL.

**Major:** Aeronautical/Astronautical Engineering and Computer Science, B.S.

**College:** College of Engineering