

图像处理、数据挖掘、云计算

大数据和手机操作系统

# 美国华盛顿大学

## 2019·计算机科学夏季项目

University of Washington Computer Science Summer Program (2019)

项目类型：暑期定制课程

项目费用：5880 美元（第一批报名）/ 6180 美元（第二批报名）

项目时段：2019 年 7 月 25 日—8 月 17 日

报名截至：2019 年 4 月 30 日起（第一批）/ 5 月 30 日（第二批）

# 美国华盛顿大学计算机科学暑期项目

## 2019 年度招生简章

### 📌 基本信息 | Basic Information

(一) 项目标题：美国华盛顿大学计算机科学暑期项目（代码：OM26T-UW-CSP）

(二) 主办单位：华盛顿大学

### 📌 项目简介 | Program Introduction

This is a three-week intensive customized content program regarding Electrical & Computer Science Engineering for undergraduate students at Chinese universities who are selected by Xiangfei Education Group. Students in this program will learn about current technological developments in the field of Electrical & Computer Science Engineering through five different related content modules. Students who complete this 75 hour specialized content program will be able to present confidently about their learning in English by the end of the program. Students may apply their learning to future studies, professional work, and personal investments.

### 📌 院校简介 | University Introduction

创建于 1861 年，坐落在美国华盛顿州的西雅图市的华盛顿大学，是美国西岸历史最悠久的大学，被誉为“公立常春藤”。USNEWS 发布的 2018 美国大学排名中，华盛顿大学位于全美综合排名第 56 位，公立大学第 18 位。UW 的生物医药学、地质学、计算机科学等学科都排名世界前列。

学校所在地西雅图市，气候宜人，冬暖夏凉，风景秀丽，就业环境绝佳，很多学生毕业后进入本地的微软、波音、亚马逊等高科技公司工作。

### 📌 项目特色 | Program Key Point

- ✓ 名校风采：走进世界顶尖学术殿堂，感受不一样的学术风采和教学理念。
- ✓ 活动丰富：每周学校和翔飞会组织同学们参加不同的活动，如与当地学生交流、观光游览等。
- ✓ 结业证书：项目结束时，学校会举办结业典礼并颁发结业证书

## 项目时段 | Program Period

### (一) 项目时段

2019 年 7 月 25 日—8 月 17 日

### (二) 报名截止

第一批截止日期：2019 年 4 月 30 日

第二批截止日期：2019 年 5 月 30 日

### (三) 接送机安排

学生应于 7 月 25 日到达西雅图机场，项目将从 7 月 25 日起提供住宿。

根据航班情况，学生可能需要 7 月 24 日从国内出发。

学生应于 8 月 17 日从西雅图机场回国，8 月 17 日起项目不再提供住宿。

注：西雅图机场代码为 SEA，以上往返日期均为西雅图当地日期

## 项目课程 | Program Outline

### Topics in Electrical & Computer Science Engineering Lecture Series (60 UW class hours)

#### (一) 课程组合

共 60 小时，分为五个主题：

1. 图像处理 Image Processing
2. 数据挖掘 Data Mining
3. 云计算 Cloud Computing
4. 大数据 Big Data
5. 手机操作系统 Mobile Operating Systems

课程围绕以上五个主题开展系列讲座，每个主题 12 小时。

项目结束时，学生将结合其中任意两个主题进行小组展示。

#### (二) Presentation Skills for STEM (15 UW class hours)

1. 共 15 小时，每天下午上课约一小时
2. 课程围绕 STEM 主题（Science, Technology, Engineering and Mathematics）
3. 旨在提高学生的英语实际运用能力，贴合理工科学术需求
4. 此课程对项目结束时的小组展示会有极大帮助。

## 📌 项目师资 | Program Professor

### ✧ Yun-Hsuan (Melody) Su (Image Processing)

My name is Yun-Hsuan Su, a 2nd year Ph.D. student working with Prof. Blake Hannaford in the Biorobotics Lab at the University of Washington. I am highly interested in exploring methods to improve the robotic teleoperation experience by integrating computer vision and AI algorithms to provide vision-based haptic feedback.

In particular, my research in UW focuses on developing a vision-based force estimation algorithm for the Raven-II surgical robot system, which combines robot kinematics information with vision to achieve accurate and efficient surgical instrument segmentation result, then by 3D reconstruction of the surgical scene, the applied force can be estimated based on tissue deformation due to tool-tissue contact.

### ✧ Henry Tremblay (Data Mining)

I started out my career as a data engineer in Zappos, at a warehouse that contained over 10 million pairs of shoes. Later, Amazon acquired Zappos, and the headquarters asked me to come to Seattle to help with the expansion of Amazon's Prime Now program. Amazon has some of the biggest databases in the world, and I used these databases to create models to determine where to put warehouses.

After I left Amazon, I worked with The Boston Consulting Group, helping Starbucks develop their rewards programs. I assisted Data Scientists by creating pipelines, through which terabytes of data flowed.

When I left The Boston Consulting Group, I worked as a consultant for Azure products, helping design the architecture for big data systems. Currently, I work at Best Buy, managing the data for an exciting new ad program. Because of my experience at three different companies, I have worked with the 3 major cloud platforms, Google Cloud Platform, Amazon Web Services, and Microsoft Azure.

### ✧ Suneetha Dhulipalla (Big Data)

Growth-minded Engineering leader known for passion and customer obsession. Worked in Microsoft for 20 years and experienced in all aspects of engineering product development including strategic planning, agile processes, building and motivating high performance teams.

Excellent communication, negotiation and leadership skills. Actively mentor many women at Microsoft to reach their full potential.

Specialties: Big Data, Data driven development, Software development, Software testing, Reliability, Performance and Scale development & testing, Monitoring & Analytics, Leadership.

#### ✧ **Sudheer Dhulipalla (Big Data)**

- Experienced Software Engineer, Group Manager and Director with 25 years of industry experience (22 years at Microsoft)
- Expertise in building large scale Windows Enterprise servers (Windows Server, Windows Networking Services, IPv6, TCPIP, Direct Access, Systems Management Services) and Azure Cloud Services (Azure Web Sites, Azure Service Bus (Messaging Services), Azure Workflow Services, Azure Hadoop Services (HDINSIGHT), Azure Data Lake Big Data Services and so on)
- Expertise in Windows Operating Systems, Windows Networking, Systems Management, .NET technologies, Distributed Systems, Windows Azure cloud services and Big Data technologies
- Expertise in managing and leading large teams to successful delivery of software products and cloud services

#### ✧ **Paul Wu (Cloud Computing)**

I currently work at AT&T as a development lead and principal application developer in Wireless Network Traffic Analytics with Big Data technologies such as Spark and Hadoop. I have taught computer science (information technology) and mathematics for nearly 15 years. The subjects I have covered include but not limited to Java, Python, Web Development and Cloud Computing, etc.

I hold a Ph. D in mathematics and a M.Sc. in computer science from Dalhousie University, Canada. I worked at the Department of Computer Science & Mathematics, Tianjin University of Technology after I graduated from Xi'an Jiaotong University, PRC.

I relish the challenge of solving complicated problems with software engineering and applied mathematics. I am truly passionate about working with various learners and help them succeed in their studies. In my spare time, I enjoy gardening, swimming, and walking

#### ✧ **Brenden West (Mobile OS Development)**

Software engineering manager with 15+ years experience delivering high-profile web and mobile applications. Versed in all phases of the software development lifecycle.

- 4+ years managing direct reports and vendors
- 7+ years leading cross-functional engineering teams with 12+ staff
- 5+ years professional services consulting
- 6+ years native iOS / Android development
- 6+ years statistical consulting, analytics & data science
- 10+ years full-stack web development
- full-stack web development

## 项目行程 | Program Itinerary

Date	Day	Morning Activity	Afternoon Activity
7/25	THU	Students arrive	
7/26	FRI	Orientation & Campus Tour	Pike Place & FIUTS Friday Activity
7/27	SAT	Free	
7/28	SUN	Boeing Factory (optional) 波音工厂参观, 门票及车费预计 50 美元	
7/29	MON	CSE Lecture: Data Mining	CSE Lecture: Data Mining Presentation skills for STEM
7/30	TUE	CSE Lecture: Data Mining	CSE Lecture: Data Mining Presentation skills for STEM
7/31	WED	CSE Lecture: Data Mining	CSE Lecture: Data Mining Presentation skills for STEM
8/1	THU	CSE Lecture: Image Processing	CSE Lecture: Image Processing Presentation skills for STEM
8/2	FRI	CSE Lecture: Image Processing	CSE Lecture: Image Processing Presentation skills for STEM FIUTS Friday Activity
8/3	SAT	Free	
8/4	SUN	Outlet(optional) 奥特莱斯往返大巴费用预计 30 美元	
8/5	MON	CSE Lecture: Image Processing	CSE Lecture: Image Processing Presentation skills for STEM
8/6	TUE	CSE Lecture: Cloud Computing	CSE Lecture: Cloud Computing Presentation skills for STEM
8/7	WED	CSE Lecture: Cloud Computing	CSE Lecture: Cloud Computing Presentation skills for STEM
8/8	THU	CSE Lecture: Cloud Computing	CSE Lecture: Cloud Computing Presentation skills for STEM
8/9	FRI	CSE Lecture: Big Data	CSE Lecture: Big Data Presentation skills for STEM
8/10	SAT	Free	
8/11	SUN	Mount Rainier(optional) 雷尼尔雪山往返大巴费用预计 30 美元	
8/12	MON	CSE Lecture: Big Data	CSE Lecture: Big Data Presentation skills for STEM
8/13	TUE	CSE Lecture: Big Data	CSE Lecture: Big Data Presentation skills for STEM
8/14	WED	CSE Lecture: Mobile Operating Systems	CSE Lecture: Mobile Operating Systems Presentation skills for STEM
8/15	THU	CSE Lecture: Mobile Operating Systems	CSE Lecture: Mobile Operating Systems Presentation skills for STEM
8/16	FRI	CSE Lecture: Mobile Operating Systems	CSE Lecture: Mobile Operating Systems Presentation skills for STEM Closing Ceremony
8/17	SAT	Depart	

注：以上行程仅供参考。学校会在项目开始前 2 周左右公布本期的行程安排

## 📌 校园生活 | Campus Life

### 1. 图书馆

图书馆约有 15 个，馆藏量在北美高校图书馆中排名第 12 名。学生持学生卡自由进出，可借阅图书和使用馆内设施。

### 2. Husky Union Building

学生活动中心全称为 Husky Union Building。整座楼功能非常的齐全，这里不仅有书店、便利店、各种餐厅，还有教室、活动室、计算机房等。

### 3. 体育馆

体育馆里的设施不是免费使用的，但是持有学生卡可以享受优惠，使用一次大约 10 美元。另外，部分宿舍楼中有健身房，学生可免费使用。

### 4. 书店

这里不仅陈列了各种图书，还有带 UW Logo 的纪念品（马克杯、T-shirt 和哈士奇公仔等），也可以在书店的咖啡厅点上一杯饮料小坐一下。

### 5. University Village

位于学校的东北方向，是一个小型的购物中心。这里有亚马逊书店、超市、星巴克、各种餐厅和甜品店、H&M、GAP 等。

### 6. UW Tower

这里是项目办公室所在地，可以前来咨询项目事宜或留学建议。