

---

# Artificial Intelligence

NANODEGREE PROGRAM

Student Handbook

---

Welcome to the Artificial Intelligence Nanodegree program. As one of the first students in this unique program, you are already ahead of the curve. You are on your path to joining the world's next artificial intelligence engineers, a field growing as fast as the technology itself. To prepare you to succeed in the program, we compiled essential information in this digital handbook. Congratulations on your first big step.

# Table of Contents

|  |    |
|--|----|
| <a href="#"><u>Meet the Team</u></a>   | 4  |
| <a href="#"><u>Your Resources</u></a>  | 7  |
| <a href="#"><u>What to Expect</u></a>  | 14 |
| <a href="#"><u>Further Reading</u></a> | 25 |

---

# Meet the Team

# Meet the Team

**Instructors** - Arpan Chakraborty, David Joyner, Dana Sheahen, Alexis Cook, Cezanne Camacho, Charles Brubaker, Jeremy Watt

**Guest Instructors** - Sebastian Thrun, Peter Norvig, Thad Starner

**Leads** - Jared Polivka, Luis Serrano Jessica Lulovics

**Services Lead** - Chris Gearhart

**Video** - Jason O'Mahony

**Student Support Coordinator** - Megan Powell

**Community** - Lisbeth Ortega



**David Joyner**  
COURSE DEVELOPER



**Arpan Chakraborty**  
COURSE DEVELOPER

---

# Your Resources

# Your Mentor

Each Artificial Intelligence Nanodegree program student gets his or her own personal mentor. This mentor will get to know you, your learning style, and will be able to help you get exactly what you want out of your Nanodegree program.

## **With Mentorship you'll be able to:**

- Get help from your mentor without even leaving the classroom
- Receive 1:1 on-demand support via your personal chat channel
- Stay on track through weekly check-ins

# Find Your Mentor in the Classroom

The image shows a screenshot of a web-based application for the Udacity Self-Driving Car Nanodegree program. The interface has a dark header bar with a navigation menu icon, a search bar, and a 'What Projects Will You Build?' button. On the right side of the header, there is a 'Mentor' section featuring a profile for 'Bill Kapsalis' dated 'OCTOBER 25, 2016'. The main content area displays a video feed of a road scene with a green path line indicating the vehicle's trajectory. A large red arrow points from the top right towards the mentor section. The sidebar on the left lists various program resources and support links.

≡

What Projects Will You Build? < >

Mentor

Bill Kapsalis

OCTOBER 25, 2016

Welcome to Udacity Self Driving Car Nanodegree! At Udacity we found that when students set weekly goals they get the best results. So, I will be checking in with you weekly to get your goals and discuss any challenges or problems you had the previous week. I will be here to answer questions about the course material or any general Udacity questions. Before you jump in to the material tell me a little about yourself! What is your

Welcome to the Self-Driving Nanodegree Program

Your Instructors

View of ND Program

Projects Will You Build?

User Support

Nanodegree Support

Walkthroughs

Code of Conduct Policy

Driving Car History

# Forums

In the Artificial Intelligence Nanodegree program, you'll have access to an exclusive forum. In this forum you'll not only be able to talk to other passionate students, but also receive help from our expert Coaches and dedicated staff.

We monitor and respond to an ongoing stream of detailed feedback from student forum participants, and this has allowed us the opportunity to constantly refine, enhance, and upgrade the model. Thanks to your feedback in the forums, we can ensure the Nanodegree program improves over time.

# Find Forums in the Classroom

The screenshot shows a dark-themed user interface for a learning platform. On the left, there's a vertical sidebar with five icons: a blue 'U' (User), a house (Home), a compass (Location), a red-bordered circle containing two overlapping white document icons (Forums), and a clipboard (Profile). A red arrow points from the text 'Click here for Forums' to the document icon in the sidebar. The main content area displays two course terms: 'Term 1' (Started Nov 18th) and 'Term 2' (Not Enrolled, indicated by a lock icon). At the bottom right of the main area, there's a teal button labeled 'CONTINUE LESSON'. In the top right corner, the text 'Nanodegree Program Artificial Intelligence' is visible.

Term 1  
STARTED NOV 18TH

Term 2

NOT ENROLLED

Click here for Forums

CONTINUE LESSON

Nanodegree Program  
Artificial Intelligence

# Slack

Udacity students of a single class can interact with each other live via Slack. With a designated private channel for your class, connect directly with students who are online the same time as you: ask questions, exchange ideas, and get to know your fellow classmates.

Join the [Slack Team for Artificial Intelligence Nanodegree students](#). Once you're in, click on Channels, and introduce yourself on the **#introductions** channel!

# Support

If you have specific questions related to course content or projects, please post to the [Forums](#), where peers & forum mentors can help!

If you have questions about the program structure or your enrollment, issues with the classroom, or any other questions or concerns that a Udacity staff member can help with, please reach out at [ai-support@udacity.com](mailto:ai-support@udacity.com).

---

# What to Expect

See our full [Artificial Intelligence Nanodegree FAQ](#) and [general Udacity FAQ](#).

# Class Timeline Pacing

This is a unique, two-term program that requires students to keep pace with their peers throughout the duration of the program. Each term is around 3 months. The entire Nanodegree program takes 6 months to complete.

# Class Timeline Curriculum

Read all about the [Term 1 curriculum](#) in our in-depth blog post.

# Class Timeline Deadlines

There are two components to deadlines:

1. **Deadline for submitting all projects:** In order to graduate a term, you must submit all projects by the last day of the term and pass all projects once they are reviewed by a Udacity Reviewer (the review may take place after the last day of the term). Passing a project means a Udacity Reviewer has marked a project as “Meets Specifications.”
2. **Suggested deadlines for projects:** We strongly encourage you to submit all projects by their individual deadline to stay on track, but there is no penalty for submitting a project past its individual deadline. You are able to submit each project until the last day of the term.

# Class Timeline Passing All Projects

Our coaches and mentors will work directly with any students who are struggling with the timeline requirements. Our ultimate goal is to ensure that every single student accepted into the program successfully graduates.

**If you do not submit all projects by the end of the term and also pass all projects once they are reviewed:**

You will receive a 4-week extension to complete any outstanding projects. You may use this extension once per term. Once you submit and pass all projects, you can enroll in the next term, which will potentially be with a later class. If you do not submit and pass all projects within the 4-week extension, you will be removed from the program and will need to pay for future access to course content.

# Class Timeline Time Dedication



**15 HOURS / WEEK**

Between instructional content, quizzes, projects, and other course-related activity, we estimate that investing 15 hours/week will enable you to proceed through the program at a successful pace.

# Class Timeline Schedule

Find the dates for each of your project deadlines next to the respective lesson [in your classroom.](#)

**Term Start** First Day of Class

**Project 1** Build a Game-Playing Agent

**Project 2** Implement a Planning Search

**Project 3** Design a Sign Language Recognition System

**Term End** End of Term

# Hiring Partner Program

## THE PROGRAM

Our [Hiring Partners](#) provide Udacity students from all over the world direct and preferential exposure to new jobs. We work directly with recruiters and hiring managers at each company to get our students fast-tracked into open opportunities. Students are evaluated for these positions based on skills, experience, and the projects showcased in their unique Udacity portfolios.

## UDACITY PROFILE & CAREERS LESSONS

Begin your job search by keeping your [Udacity Profile](#) up to date and turning “Recruiter Access” on your profile to “On.” This lets us know you want us to share your profile with recruiters. See our [Careers Resource Center](#), [Hiring Partner FAQ here](#), and read about the kinds of [artificial intelligence jobs in the field](#).

# Community

Finding support in fellow students can make all the difference in your educational experience. Every student offers their own unique knowledge and skills, and that's exactly what makes your classmates valuable resource as you move through the program.

Take advantage of the Forums, Slack, or even form a study group. These are all spaces to exchange ideas, questions and progress with your classmates.

# Community (cont.)

## COMMUNITY EVENTS

Community events will give you the opportunity to meet classmates both on and offline (dependent on location), team-build and take part in extracurricular opportunities.

## STUDY GROUPS

Interested in forming a study group? Try [Meetup](#) to form a local study group. Share it with other students on Slack and ask Community Manager, Lisbeth, to get the word out.

# Policy

## COST

The Nanodegree program costs \$800 per 3-month term

## REFUND

Students have a 7-day window from the day they receive access to the program, the first day of their class, to unenroll and request a refund. To request a refund, email **[ai-support@udacity.com](mailto:ai-support@udacity.com)**.

---

# Further Reading

# Courses on Udacity

[Deep Learning Nanodegree Foundation](#)

[Machine Learning Engineer Nanodegree by Google](#)

[Artificial Intelligence for Robots](#) (Free Course)

[Intro to Statistics](#) (Free Course)

[Programming Foundations with Python](#) (Free Course)

[Introduction to Computer Vision](#)

# Reading Resources

[AI Nanodegree Program Syllabus: Term 1, In Depth](#) (Dhruv Parthasarathy)

[6 areas of AI and machine learning to watch closely](#) (Medium)

[Machine Learning is Fun! An introduction to Machine Learning](#) (Medium)

[Are Udacity Nanodegrees worth it for finding a job?](#) (Quora)

[Understanding LSTM Networks](#) (Christopher Ola)

[A Beginner's Guide To Understanding Convolutional Neural Networks](#) (Adit Deshpande)

[Transmission.ai - Self Driving Car & Deep Learning Newsletter](#) (Oliver Cameron)

[Most Cited Deep Learning Papers](#) (Github)

# News / Resources

[What a Deep Neural Network thinks about your #selfie](#) (Andrej Karpathy)

[Neuron explained using simple algebra](#) (Medium)

[26-year-old hacker gets \\$3M for self-driving car startup](#) (CNN)

[Identifying rare diseases, lung cancer and more with Deep Learning](#) (Transmission)

[3D Faces Generated From 2D Photos, Machines Learning to Hand-Write & More](#) (Transmission)

[App Helps Fishermen Instantly ID Their Catch](#) (NVIDIA)

[The Unreasonable Effectiveness of Recurrent Neural Networks](#) (Andrej Karpathy)

[Write an AI to win at Pong from scratch with Reinforcement Learning](#) (Medium)

# Datasets

[Kaggle](#)

[Reddit](#)

[Aggregate of Datasets](#)

# Other Resources

[Stanford Convolutional Neural Networks for Visual Recognition](#)

[Deep Learning Framework written in Swift to use on apple devices \(written by @amund\)](#)

[Image Segmentation From comma.ai](#)