

EVAN AURA 3D workshop.

Cybula Ltd.

Course aims.

The course is aimed at introducing the AURA pattern match technology and Cybula's FaceEnforce 3D image capture and face recognition methods.

The AURA methods are based on neural networks and can be used for fast pattern matching on very large datasets. The methods are based on a simple binary neural network known as a Correlation Matrix Memory. The memory is used to store example data to be matched. The AURA methods define a set of pre-processing methods that can be used to take different data types and recognise the contents. The pre-processors are defined for text, signals and graphs. The last of these is of most interest here as it allows 3D image data to be analysed. A graph is a set of points that are connected by relations. In the context of a 3D image, the set of points could be landmarks and the relations could be the distance between the points. Thus the AURA graph matcher may be used to recognise objects specified by such data.

Cybula have for many years been developing and marketing a 3D face recognition system, FaceEnforce. The system is used to recognise 3D images of faces taken with a 3D camera. The camera allows capture of an image in about 0.5-1.5 seconds that is sufficient for recognition. For higher accuracy images a longer time will be needed. The camera may be used to capture any type of data within reason.

The course will cover;

- Overview of biometric methods.
- Overview of the Cybula FaceEnforce system.
- Use and function of the Cybula 3D camera.
- Use and function of the Cybula face recognition software.

- Introduction to pattern recognition.
- Overview of the AURA methods.
- How the graph matcher works and can be applied.
- Implementation of applications using the AURA graph matcher.

Open discussion of user applications with the Cybula team.

We will provide time to discuss, in detail, how Cybula technology may be used, alongside other Evan software, to solve practical problems. We will cover each of these in an open discussion with the group. We intend 3 applications to be discussed. Please let us know if you would like your application discussed and we will contact you to set this up. We hope that we will be able to look at data during these sessions.

Prerequisites.

You will get more from the course if you know Linux and C++. However, this is not essential. We expect you to have a scientific training and a degree in a science-based subject.

Structure.

The workshop will cover two days and be run on the York University main campus. There will be a social event in the evening of the first day. The course will start at 9.30 on the first day and be complete by 4:30pm on the second day.

Accommodation.

The candidates are expected to book their own accommodation. Attached are some recommended hotels.

Timetable

	Day 1 - 30th April	Day 2 - 1st May
09:00		The AURA graph matcher theory of operation JA
09:30	Introduction to the workshop JA	
10:00		Break
10:30	Break	Application of the AURA graph matcher AT
11:00	Introduction to pattern recognition using AURA SA &AT	
11:30		Example applications of the graph matcher AT & SA
12:00	Lunch	
12:30		Lunch
13:00	Overview of Biometrics and face recognition JA	Application discussion sessions JA, JY, SA, AT
13:30		
14:00	Use of the 3D camera JY	
14:30	Operation of the 3D camera JY	
15:00	Break	Break
15:30	Use and operation of the 3D face recognition SW JY	Application discussion session and round up. JA, JY, SA, AT
16:00		
16:30	Discussion ALL	
17:00		

UNIVERSITY OF YORK

Accommodation Office Tel: 01904 434870

Contact Emma Jones, Bookings Assistant

University of York

E-mail: ej510@york.ac.uk

Web: www.york.ac.uk/campuservices/accom

LOCAL GUEST HOUSES

***Abacus Guest House Tel: 01904 632301**

5 Wenlock Terrace, Fulford Road, York.

Adams House Hotel Tel: 01904 655413

5 Main Street, Fulford, York.

E-mail: adams.house2@virgin.net

***Ascot House Hotel Tel: 01904 426826**

80 East Parade, Heworth, York

Web: www.ascotouseyork.com

Ashbourne House Tel: 01904 639912

139 Fulford Road, York.

Web: www.ashbourne-house.com

***Barbican House Tel: 01904 627617**

20 Barbican Road, York.

E-mail: info@barbicanhouse.com

Web: www.barbicanhouse.com

The Black Bull Hotel Tel: 01904 411856

Hull Road, York.

The Blakeney Hotel Tel: 01904 422786

180 Stockton Lane, York.

Web: www.blakeneyhotel-york.co.uk

***The Blue Bridge Hotel Tel: 01904 621193**

Fishergate, York.

***Bull Lodge Guest House Tel: 01904 415522**

37 Bull Lane, Lawrence Street, York.

E-mail: stay@bulllodge.co.uk

Web: www.bulllodge.co.uk

***Chelmsford Place Guest House Tel: 01904 624491**

85 Fulford Road, York.

Web: www.chelmsfordplace.co.uk

***Coppers Lodge Guest House Tel: 01904 639871**

15 Alma Terrace, Fulford Road, York.

***Four Poster Lodge Tel: 01904 651170**

68 Heslington Road, Barbican Road, York.

E-mail: fourposter.lodge@virgin.net

***Friar's Rest Tel: 01904 629823**

81 Fulford Road, York.

Hall Garth Paddocks Tel: 01904 481609

Hull Road, York.

The Hollies Guest House Tel: 01904 634279

141 Fulford Road, York.

Jubilee Guest House Tel: 01904 624013

Barbican Road, York.

Keys House Tel:01904 658488

137 Fulford Road, York

The Limes Guest House Tel:01904 624548

135 Fulford Road, York

E-mail: queries@limeshotel.co.uk

Midway House Tel: 01904 659272

145 Fulford Road, York.

E-mail: midway.house@virgin.net

Web: www.midwayhouseyork.co.uk

Moorgarth Guesthouse Tel: 01904 636768

158 Fulford Road, York.

E-mail: moorgarth@fsbdial.co.uk

Web: www.moorgarth-york.co.uk

***The Old Vic Guest House Tel: 01904 637888**

2 Wenlock Terrace, Fulford Road, York.

***Olga's Guest House Tel: 01904 641456**

12 Wenlock Terrace, Fulford Road, York.

Pavillion Hotel Tel: 01904 622099

45 Main Street, Fulford, York.

Priory Hotel Tel: 01904 625280

126 Fulford Road, York.

Saxon House Hotel Tel:01904 622106

71-73 Fulford Road, Fishergate, York.

Victoria Villa Tel: 01904 631647

72 Heslington Road, York.

***Warrens Guest House Tel: 01904 643139**

30 Scarcroft Road, York

Web: www.warrens.ndo.co.uk

World View House Hotel Tel: 01904 632061

173-5 Haxby Road, York.

E-mail: Enquiries@worldviewhousehotel.co.uk

York Luxury Hotels Tel: 07746 552478 (mobile) 11 Earswick Chase, Old Earswick, York YO32

9FZ Email: sue@yorkluxuryholidays.co.uk: 07746 558 Web: www.yorkluxuryholidays.co.uk

York Tourist Information Centre Tel: 01904 621756

E-mail: tic@york-tourism.co.uk

Web: www.york-tourism.co.uk

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4 St Peters Grove Fax: 0870 0660159

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E-mail: mail@marmadukeshostels.com

Web: www.marmadukeshostels.com/englishhome.htm

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York YO1 6JX

E-mail: yorkbackpackers@cwcom.net

Web: www.yorkbackpackers.mcmail.com

York Youth Hotel Tel: 01904 625904

Bishophill House

11/13 Bishophill Senior

York YO1 1EF

E-mail: info@yorkyouthhotel.com

Web: www.yorkyouthhotel.com

Youth Hostel Association Tel: 01904 653147

Haverford

Water End

Clifton

York YO30 6LP

E-mail: york@yha.org.uk